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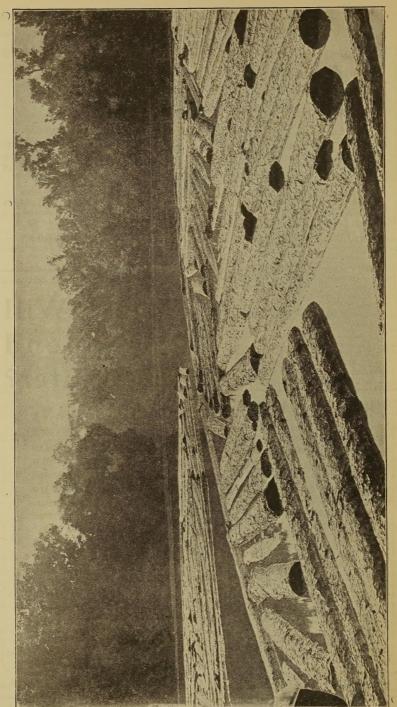
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CURRENT EVENTS

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CONTENTS

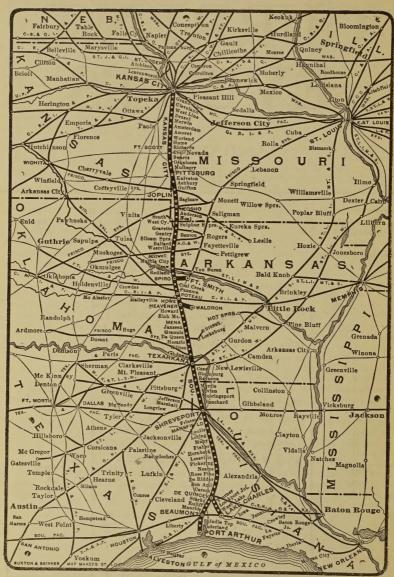
Page Nature's Vineyard on the Ozark Plateau, Carl A. Starck..... 7 Shreveport as a Health Resort, G. C. McDonald County, Missouri.......11 City of Fort Smith, Geo Sengel......19 The Manufacture of Ice......22 The Griffing Brothers Nurseries at Port Arthur, Tex.....23 Agricultural Development in the Port Arthur Section......27 Shreveport, La., and the Jefferson Easy Money in Stock Raising, Mrs. A. The Apple Crop at Bentonville, Ark., H. E. Woods......31 New Colonization Enterprises......32 The Mining Industry.....33 Christmas in the K. C. S. Telephone The Question of Railway Mail Pay....39

FIFTY-FOUR

CURRENT

NUMBER





MAP OF THE KANSAS CITY SOUTHERN RAILWAY

Nature's Vineyard on the Ozark Plateau

CARL A. STARCK, Rogers, Ark.

Benton County, Ark., has an average altitude of fourteen hundred feet and comprises nine hundred square miles, or 535,-000 acres; of this area, about two hundred thousand acres consists of chert covered, timbered ridges. The topography is very different from the usual mountain formation; instead of standing in isolated hills or mountains. these ridges run out from the high prairies for miles, practically level, with subsidiary ridges leaving the main ridge at all angles; these branch again and again into shorter ridges and spurs, but always maintain the level of the main ridge, which also keeps the general high level of the country. These radiating ridges with their corresponding hollows which are from one hundred to three hundred feet below, form a series of practical levels that render every ridge and hollow easily accessible to travel.

And these Benton County ridges, by the way, owing to the chert in the soil, are according to a government report, "the finest natural highways in the United States," to quote the exact words. The topography is the result of erosion, the action of water during countless ages, for the Ozark uplift is almost the oldest land in North America, being nearly the first land to emerge from the ocean. The Rocky Mountains are as of yesterday as compared with the Ozarks.

The soil of these ridges is composed of the disintegrated rock forming the skeleton of the ridge. This underground skeleton, undoubtedly takes the general form of the ridge but it is covered with from twenty to forty feet of broken rock (too small to be a serious obstacle in cultivation) mixed with clay, which clay represents the decay of the more perishable rocks, mainly limestone—for when these beds were put down this was an old ocean floor

Pure limestone consists entirely of the fossil remains of the marine life inhabiting a deep, still ocean, that lived out its brief span and sunk in unnumbered millions to the bottom, in clear water, far from any continent. But the beds of cherty limestone (and this is what we are interested in) were put down when that portion of the old primeval sea, which we now know as the Ozark Mountains, was shallower and

nearer land, so that the water was muddled and made roily by sediment bearing rivers, and the remains of marine life mixed with clay and silica as it settled to the ooze below, and eventually hardened into rock. This deposition though much more rapid than the former, went on for ages with alternate upheavals and subsidences though always remaining beneath the water, until many hundreds of feet in thickness were formed.

In the course of the ages, this part of the ocean bottom was lifted out of the sea and became dry land. Then another immeasurably long period set in that has lasted for many, many ages, and will endure for many, many ages yet to come. But instead of deposition and a building up, it is a period of destruction, of denudation, of The same forces are at work erosion. today before our eyes, tearing down these old rocks by the agency of wind and rain, frost and snow and ice, and summer heat, eating out the river channels, cutting out the hollows and smoothing the hills in this endlessly slow process, still at work, until the Ozark country presents the beautiful, gently rounded contours of today.

This soil, which makes the surface of today, in which we plant our apple trees and our grape vines, is composed, as above indicated, of the weathered, shattered detritus of these old rocks, and is very rich in all the elements of plant growth, particularly phosphoric acid and potash. It is nearly deficient in the desired quantity of humus, but that fortunately, is one of the requirements of plant life that is most easily supplied. This limey, cherty, weather-beaten rock, much of it so soft and rotten that it is as easily cut as hard clay, decomposing very quickly when turned up by the plow, full of marine fossils, mixed with clay and silica, full of phosphoric acid and potash, is a most ideal soil for fruits, and it is particularly adapted to grapes.

Whatever the origin of the grape, it is a well established fact that four of the five great classes into which botanists divide the grape genus are native to America, and all cultivated varieties of grapes have descended from these four classes, or are crosses of hybrids between them and the Asiatic class. Of the four classes, the most important to the Southwest is the deep-rooting Aestivalis, or "summer grape," to which class belong the wild grapes growing so abundantly all through the Ozarks, on the ridges and down their sides.

While this family has produced some good table grapes, its importance lies in the fact that the finest wine grapes of America have come from this class or family; and through this fact, Arkansas, especially the Northwestern corner of the state, may assume high commercial importance by becoming a producer of the finest red wines not only of America, but of the world.

A sample of wine of the Cynthiana variety, which is the best wine grape of this Aestivalis family, was awarded the first premium at the World's Exposition at Vienna, Austria, in 1873, as "The Best Red Wine of all Nations," where it of course came into direct competition with the most celebrated

wines of Europe.

The home of this family of grapes is right here in northwest Arkansas, and the original Cynthiana vine was found as a wild vine in the woods, in Benton County, Ark., just as countless millions of other grape-vines are now growing wild all over this Ozark country. And while the fame of this plateau of northwest Arkansas has become world wide as the land of the big red apple, it much more deserves to be recognized as the home of the vine, and the birthplace of the red wine grape. I would like to emphasize the fact that the apple is a foreigner, an alien, and was brought here by the white man, but the grape vine was born here.

At a depth of from two to three feet, the soil changes from a light ash color to a deep red clay, so rich in iron, that it is almost a low grade iron ore, and it is this iron in the soil utilized in a greater or less degree by plants, that gives to our apples their crimson blushes, and to the grape its fine purple.

Plants differ very much in their capacity to take up iron out of the soil, and of the whole vegetable kingdom certain of the grapes come first in this respect. Or, to put it in another way, certain red grapes will take up and store in the pulp next to the skin, a larger percentage of iron than any other known plant. This is the reason why red wines, when pure, are prescribed by physicians as a restorative after illness, and for anaemics and all persons deficient in good, red blood.

Your doctor will tell you that the only way in which iron can be gotten into the

blood, is in the form of what is called an organic solution-that is, where some plant has first taken up the iron from the soil, and the vegetable, or usually some extract from it, administered to the patient. He will tell you, too, that no chemist or pharmacist has yet succeeded in producing an organic solution of iron, but that nature, in the wonderful little laboratory inside the grape berry by aid of the sun and the soil, does prepare this solution of iron, ready for conversion into red corpuscles. nothing yet known to science will take the place of this natural medicine for the weak, the debilitated, and the aged, whose fires of life are slowing down.

The fresh juice (or "must" as it is called) of this Cynthiana grape, will in this gravelly soil, in a good season, be so full of sugar that it runs beyond the marking of the "must" scales in use for making this test. The instrument is, in rare cases graduated up to 110 degrees. A must reaching this specific gravity indicates a sugar content of about 26 per cent. We have had our Cynthiana juice to register as high as where 115 would be on the scale, indicating at least 27 per cent sugar-that is, about eight gallons of must contains twenty-seven pounds of grape sugar. This is very unusual and will produce a wine of about 13 per cent of spirit, as the sugar is converted into alcohol by fermentation.

An analysis of a large number of foreign wines made some years ago gave the following figures as averages: German red wine, 11.75 per cent; German white wines, 11.76 per cent; German white wines, 11.76 per cent; Hocks, 10.83 per cent; White French, 11.67 per cent; Red French, 10.58 per cent; Moselles, 10.02 per cent. The average of Burgundies indicated 12.78 per cent and in a number of the Hungarian wines, the heaviest of all, the average proved to be 12.85 per cent. While as just stated, the wines from Arkansas grown Cynthiana grapes, contain a little over 13 per cent, producing wines heavier than the heaviest wines of the Old World (the Hungarian), and leaving the Burgundies far behind

And, by the way, this about reaches the limit of alcoholic strength in wines, as it is impossible to develop more spirit by fermentation than a little more than 13 per cent, because the presence of this amount of alcohol arrests and checks further fermentation. If a larger per cent of sugar were present it would only remain as free sugar, and would not be converted into spirit. No natural wine can possibly contain more than a little over 13 per cent

of spirit, and if more is present in any sample of wine, it is proof that it has been added after fermentation. This addition is in the form of grape brandy in the case of genuine Ports and Sherries, but generally as a low grade alcohol in the villainous compounds called "Sweet Catawbas," etc., and spurious wines generally when dissociated from the vineyard.

As it is well known that the patent medicines, bitters, tonics, etc., on the market contain all the way from 18 to 60 per cent of spirits as they come from the drug stores, and very few run under 22 per cent, and whiskey and brandy have 50 per cent, it is very apparent that a natural medicine containing but 13 per cent, holding its ingredients in perfect solution, constitutes an ideal medicine. The spirit acts as a preservative of the ingredients, and no other preservative has yet been found that can take its place, so that necessarily about all of the fluid medicines, tinctures and extracts on the shelves of the druggist are solutions in alcohol.

There is no question whatever that Benton County can produce a class of red wines that cannot be equalled anywhere in Europe, and of course not in California, of a class similar to but finer than the heavy red wines of the Burgundy type. Of the lighter, delicate, white and red wines I will not say this, for I believe that parts of France and Germany will always remain unexcelled in that class of wines.

And under kinder legislation with careful regulation, a magnificent, new industry can be developed here (the practicability of which I have fully proven in twenty years of my work here), for there is an unlimited market in Europe for this class of wine, just as there is for our fine apples. At the same time it would make for temperance, for wine is a temperance agent in that the use of it creates a distaste for strong spirits. In the wine growing districts of Europe, drunkenness is almost unknown, although among the peasants and working people sour wine with rye bread is the daily diet. And wine has always, and everywhere as far as history sheds its light, been associated with culture and civilization, and polite society.

Many of the table grapes also do well here. We have tested in all some 165 varieties of both wine and table grapes. We have grown as fine Delawares as can be produced anywhere, and by grafting this noble grape into the deep-rooting Aestivalis roots we have much increased its drouth resisting properties. We got more than 6,-

000 pounds of Concords from one acre of five-year-old vines and these were all that could be desired both in size of berry and cluster, and I have never seen Concords from western New York—the home of the Concord—that were so nearly perfect.

This would indicate that the growing of table grapes on a commercial scale would be a profitable enterprise, as two important factors, quality and yield, are assured.

But I must not create the impression that these ridges are adapted only to fruit growing, as I may, if I do not say something further; something of the remarkable adaptability of this timbered, ridge land to clover and the tame grasses for stock raising; the abundance of white oak mast for hog raising-and I am sure that nowhere in the United States can a pound of pork be produced at a lower cost than here by the use of stock peas and the use of the wild range in the woods. There is a fine forestry proposition practicable here, owing to the rapid growth of the timber, and by a system of annual cutting one could derive a perpetual income from his timber land; the profit arising out of the annual increase in the size of the timber and the steady enhancement in the value of hardwood lumber. At the same time, being somewhat opened to the sun, the land could be profitably utilized as pasturage for a stock farm.

I wish that I had time to go into this a little further—still I am not going to close this without touching the aesthetic side a little, and say that for anyone desirous of dwelling "on the heights"—figuratively as well as actually—life in these beautiful Ozark ridges, will call out the best that is in the soul. Everyone is influenced by his environment, and one couldn't live in daily touch with such scenery as this, without becoming a somewhat better man or woman.

These ridges offer a home in its completest sense alike to the idealist to whom fortune has been kind, and to the practical man of affairs who wants to watch his nest egg grow. Each can dream his dreams and see them realized while keeping his pot boiling. These ridges offer homes for the small, intensive farmer and also offer magnificent building sites, on commanding heights, for the modern, elaborate country home.

The air we get hasn't touched the earth since it arose over the Gulf of Mexico, for this southern rim of the Ozarks Plateau is the first land encountered in its sweep northward. The climate is ideal, no excessive summer heat nor rigorous winters, we have no hot nights, no malaria, no mos-

quitoes, no dust, no mud. Springs of water of such purity as only the Ozarks can show are in almost every hollow.

The present undervaluation because "undiscovered," makes this land desirable and

profitable when considered merely as an investment. The poorest man can here get a start in life, if industrious, and the man of means can indulge his tastes no matter how broad their scope.

Shreveport, La., as a Health Resort

G. C. CHANDLER, President City Board of Health

Shreveport, with its splendid climate and beautiful homes and remarkable health conditions should make it one of the principal winter resorts of the country, so I am writing a letter to you with this object in view.

A city of 40,000 that has had only 212 deaths among babies under one year of age and 335 under ten, including those under one, during three entire years, ought to present inducements to any father or mother seeking a mild climate during the winter. A city that has only 6 per cent of the white deaths occurring from consumption and an almost equally low percentage from pneumonia, when the average in the cities of the United States is nearly doubled that per cent, should be an inducement to all who fear these diseases from the rigorous winters of the North.

A few other facts that can be brought to recommend Shreveport, as a winter resort, are that the total deaths, including non-residents, among the whites in Shreveport during the past six years, are as follows: There have been no deaths from smallpox, only three from measles, none from scarlet fever, two from whooping-cough, ten from diphtheria, two from simple meningitis and only fifty-eight from

diarrhoea among infants under two years

Shreveport is supplied with many first class hotels to accommodate visitors. It is high and dry with well paved streets and has a climate that equals any that can be found. It has no rigorous winters and yet, it is not warm enough to be enervating. Shreveport, with fine hotels, good roads, running in eight directions and many other advantages, should present an ideal location for winter homes for people desiring to escape the severe winters of the North and I am quite sure if it is properly advertised the already large hotel facilities would have to be increased to house visitors that would winter in Shreveport.

I am writing to the general passenger agents of the different roads entering Shreveport with the view of inducing them to advertise the advantages of our city; for I am sure it will be to the mutual interest of the railroads and the city of Shreveport.

There has been only three white resident deaths from typhoid fever in Shreveport in three years. If you will advertise Shreveport, I will gather for you data on the various things that should make this city a Mecca for those desiring a mild climate during the winter.

A LOUISIANA VIEW OF SUGAR.

The policy that brought about "free sugar," with its train of ruin and suicide, has proved to be economically wrong, and a splendid opportunity is given those responsible for it, and its incidental treasury deficit, to retrieve their error gracefully by alleging that the world's upheaval was not foreseen when they acted, and that conditions now justify them in altering their views. That a great mistake was made is evident now to everyone. The tariff revenue from sugar is needed, absolutely, by our government. Makeshift taxation will not supply it. The people are uncomfort-

able under direct imposts that they feel the weight of and are reminded of daily; whereas the duty on sugar they never knew they were paying, until some demagogue called their attention to it. At 80 pounds per capita consumption, a difference of, say, one cent a pound, represented by the duty, means a tax of 80 cents a year, surely not a sum to get excited about, and on the poor man it is much less than this, because he eats less confections; the sugar used in tea and coffee is a very small part of the consumption. The main consumption is in sweetmeats, of which the well-to-do are the only real heavy buyers.—Manufacturers' Record, Baltimore.

McDonald County, Missouri

The western slope of the Ozark Mountain Region may be said to extend from Newton county, Missouri, southward to Sevier county in Arkansas, the line of elevation being a very irregular one and extending more or less into Oklahoma, north of the Arkansas River and quite extensively south of it. The Arkansas River divides it into two irregular sections, of which the southern part is more precipitous in its general characteristics. The Ozark Mountains are, as a matter of fact, not mountains at all, but rather an elevated plateau, which by the erosion of the water courses, going on for unnumbered ages, has been cut into uneven elevated areas, separated by valleys of varying width. They do not in any sense, present the sterile landscape of the Rocky Mountains, but constitute a fertile, wooded, upland, broken in a thousand places bv beautiful streams, flowing through rich valley lands. In large areas the original cap rock has entirely disintegrated, making soil, and in smaller areas more or less limestone gravel and pebbles lie scattered on the surface of a deep fertile soil.

The northernmost end of this western slope is occupied by the county of McDonald in Missouri and Benton county in Arkansas. These two counties are adjoining, with only an imaginary state line between them and have to all intents and purposes the same general characteristics. About the only difference between them is that Benton county has reached a somewhat higher state of development and has a greater area of smooth land than has McDonald.

From Kansas City to the line which separates Arkansas from Missouri the distance is 200 miles by way of the Kansas City Southern Railway. The development of the coal, lead and zinc deposits near Joplin, Mo., and Pittsburg, Kans., and in the adjacent country had the tendency to attract immigration to these respective locations, particularly so as these developments were followed by extensive railroad construction. McDonald county had a short local railway line, but practically remained undeveloped territory until the Kansas City Southern Railway was built. Settlers had moved into the county seventy years ago, but the active settlement of the county may be said to have begun with



INDIAN VALLEY, ANDERSON, MO.



MAIN STREET, ANDERSON, MO.

the completion of this railroad. New towns sprang into existence and within a few miles of the railroad great orchards and vineyards crowned the ridges and the uplands and well cultivated farms became numerous, where, before, they had been few and far between. Yet with all the improvements made in the last twenty years, there is still open to cultivation a great acreage of good and fertile land, which, were the advantages better known, would be highly attractive to the general farmer, fruit grower, truck grower, poultry man and stock raiser

The lands common to the western slope of the Ozark Region, and also of McDonald county in Missouri and Benton county in Arkansas, may be, for a better understanding, classified as follows: The bottom lands. the ridge lands and the comparatively level uplands or plateau lands. The bottom lands, of course, are found along the creeks and rivers. The valleys, through which they flow, are, as a rule, narrow, but of exceeding fertility of soil. The soil is usually a very dark or black loam, and excellent for all ordinary field crops as well as potatoes, berries, and commercial truck. The ridge or hill lands, while not particularly desirable for general farming purposes, where machinery must be used, are unexcelled for the cultivation of fruit, berries, grapes, etc., and take very kindly to domestic grasses sown for pasturage, such as blue grass, white clover, etc., in fact, where the timber has been removed the Japan clover, a most excellent forage plant, and many native succulent grasses take the ground and make fine pasturage. The uplands or plateaux can be further divided into open lands and timbered lands, both being in the nature of prairies, in that they vary from level to rolling lands, but are not hilly or broken. They have a loamy, clay soil, with some gravel in places, and have not their equal for the cultivation of fruits and grasses. They will, under proper cultivation, yield very good crops of corn and grain. The loose gravel scattered over the surface in places, does not in the least interfere with the cultivation of the soil and in fruit growing and the raising of berries, is of decided advantage, as the presence of the gravel tends to retain the moisture in the soil in dry weather and in some unexplained way, hastens the maturing of the fruit, that is to say, fruit grown on gravelly land is generally ready for the market several days earlier than that grown on unmixed soil, and also it appears that the fruit is more richly colored. The disintegration of the gravel probably adds some ingredient to the soil which may not be present in the unmixed soils. With the exception of small stretches of open prairie land, or where it has been cleared and put into cultivation, or used in the manufacture of lumber, the entire county is covered with a growth of hardwood timber, principally red oak, some white oak and other varieties. People clearing land frequently manage to dispose of this timber for enough money to pay for the clearing.

Owing to the diversity of the surface the landscape in McDonald and Benton counties is of exceptional beauty. Springs of the purest freestone water are found in every nook and corner, and at very short distances beautiful, clear, springfed mountain streams are found winding their way through the valleys and skirting the hills. The general altitude of the county is from 1,000 to 1,200 feet, affording a pure atmosphere, a moderately cool summer temperature and very pleasant and healthful winter weather. During the summer months this region is visited by several thousand people from Texas and Louisiana who come here to enjoy the climate and have their outings and during January and February of each year people from North and South Dakota spend their winters here. On the score of climate this section of country has all that can be wished for, otherwise the stranger from afar would not come here to avail himself of it.

Northwest Arkansas and Southwest Missouri have long been known as the country of "the Big Red Apple." The apple, like wheat, is a staple here. The apple is grown with more or less success all over the United States, but as a commercial

crop, dependable upon as a source of continued income, it seems to have reached its perfection in the Ozark region. The railway facilities as now provided have made possible the cultivation of this fruit on a commercial basis and many, many hundreds of carefully cultivated orchards are now devoted to this crop. The fruit is shipped in carload lots and occasionally in train loads, and much of the apple crop is usually purchased from the grower on the tree long before it has matured.

There are usually forty-nine apple trees to the acre in the average orchard, and, one year with another, each tree should yield \$2 worth of fruit, figuring only such as is standard in the market and termed "first class." This would yield a revenue of \$98 per acre. But if only one-half of this were obtained the money yield, \$49 per acre, would exceed the income derived per acre from growing corn, wheat or any other field crop. The fruit which is not up to the standard required by the market is converted into cider, vinegar and evaporated or dried apples, which also form a source of revenue. Cold storage plants have been installed in a number of places and these enable the grower to store his apples for several months in case the prices are not entirely satisfactory at the time of harvesting. Partial failures, and at long intervals a complete failure, occasionally happen, but not often enough to worry the



ANDERSON, MO.



CHAPMAN BROS.' STRAWBERRY FIELD, ANDERSON, MO.

growers, who also cultivate other crops as well as apples.

Strawberries are extensively grown in McDonald county. An acre of thrifty strawberry plants will net, one year with another, \$75 to \$100 and they reach perfection here. Money returns of \$150 to \$250 per acre are not uncommon. The ridge lands and uplands are equally good for the growth of the grape and a greater acreage in grapes is planted from year to year. Most excellent table grapes are produced and meet with a ready demand. Raspberries, blackberries, cherries, plums, peaches and pears are more or less extensively grown. The peach is an exceptionally valuable commercial crop and a good many carloads are shipped from the county. Fast fruit trains equipped with refrigerator cars deliver this fruit in Kansas City, St. Louis, Chicago, Denver, St. Paul, Cleveland, etc., within twenty-four to forty-eight hours.

A very large source of income in this section is the production of poultry and eggs, fine live stock, horses, mules and hogs. Three small towns in Benton county handle every week in the year from \$25,000 to \$30,000 worth of poultry and eggs and every town in McDonald county ships eggs and poultry. The housewife in the poultry department can rival the man in the orchard and the business of raising poultry yields a steady and certain income. The climate and other conditions are such that poultry can be raised with little expense or loss and a profitable business can be

started on a small capital. Joplin, Mo., population 45,000; Pittsburg, Kans., population 21,000; Fort Smith, Ark., population 35,000; Kansas City, Mo., and suburbs with nearly half a million population, are within a few hours' run and afford an excellent market for all kinds of food products. Within a radius of one hundred and fifty miles is an industrial population approximating 250,000.

The hills and valleys of this section present ideal conditions for the successful raising of live stock of all descriptions. The native grasses are abundant and nutritive. Domestic grasses are readily grown, the country being wonderfully productive in the matter of forage. Splendid streams of pure water are found in all parts of the country and natural pasturage exists about nine months in the year. The winters are mild and but little if any indoor feeding is required; in fact nearly all live stock can be kept in the open all the year around.

General farming, embracing the production of the various cereals, forages and the raising of cattle, horses, mules, hogs and sheep, is carried on here as in any other good farming country. Wheat, oats, corn, clover, timothy, blue grass, flax, potatoes, sorghum cane, etc., yield here as abundantly as anywhere else and most fruit and truck growers engage in general farming as well. The longer growing season makes possible here the cultivation of a greater variety of products than can be

grown in more northerly latitudes. The natural conditions do not require that one put all his eggs in one basket, and so diversified farming has become the rule among the more progressive farmers. It secures a cash income at various times in the year, and a man with money in his pockets feels several hundred per cent better than the one who must wait until his only crop has matured.

The most recent state report, that of 1912, concerning commodities shipped by rail from McDonald county gives the following information: Live stock shipped: Cattle 2,830 head, hogs 8,176 head, horses and mules 143 head, sheep 1,810 head. Farm crops: Corn 654 bushels, hay 252 tons, seeds 15 bushels, nuts 2,386 pounds. Mill products: Flour 4,156 barrels, cornmeal 31,392 pounds, bran 10,000 pounds, feed, chops, etc., 186,000 pounds. Forest products: Lumber 2,755,000 feet, logs 258,000 feet, railroad ties 44,500, fence and mine posts 284,200, cordwood 120 cords. Farmyard products: Live poultry 251,159 pounds, dressed poultry 430 pounds, eggs 442,620 dozen, feathers 120 pounds, hides and pelts 257 pounds, dressed meats 20,433 pounds, tallow 987 pounds. Nursery stock 2,088 pounds, butter 7,046 pounds, ice cream 5,016 gallons, wool 16,064 pounds, cider 80 gallons, game 1,600 pounds, fish 4,888 pounds, furs 31 pounds, vegetables 2,692 pounds, canned vegetables and fruits 4,382

pounds, fresh fruits, miscellaneous, 4,374 pounds, strawberries 80,438 crates, dried fruits 150,166 pounds, apples 5,335 barrels, cantaloupes 1,302 crates, blackberries 858 crates, peaches 732 baskets, pears and plums 58 baskets.

The county in the same year produced 54,138 bushels of wheat, 78,080 bushels of oats, 718,728 bushels of corn and 12,165 tons of hay and forage. The value of the property rendered for taxation in 1913 amounted to \$3,237,441. The assessed value of real estate was \$2,318,736, that of personal property \$918,705. The live stock in the county consisted of 6,035 head of horses, 1,524 mules, 102 asses and jennets, 9,865 cattle, 6,704 sheep, 16,811 hogs and 622 head of other live stock, valued at \$499,750.

In McDonald county, by reason of its sparse population as compared with other counties in the state, lands generally are very low in price except in such localities where the fruit growing industry has been developed on a large scale. Here they are as highly valued as in other parts of the Ozark region. There are thousands of acres of fine ridge lands which can yet be had at prices ranging from \$5 to \$15 per acre, while plateau lands which are as yet unimproved can be had at from \$15 to \$20 per acre. Upland farms, cleared but not set to orchard, vary in price from \$20 to \$40 per acre, the price depending on proximity to railways, good country roads, dis-



NICKELS & WHITE ORCHARD ANDERSON, MO.



CATTLE FOR SHIPMENT, ANDERSON, MO.

tance from shipping town and improvements on the farm itself. A well tended orchard is worth from \$75 to \$150 per acre and often more. The bottom lands, better suited for general farming than for fruit culture, run in values from \$25 to \$50 per acre, the higher priced lands having improvements on them. Under conditions as they now obtain in this county a man of moderate means can find a good tillable tract unimproved and build it up, and the man who wants a finished farm together with a bearing orchard and high class improvements can also find what he seeks. In either case improved or unimproved land can be had for less money in McDonald county than anywhere north of the Missouri state line.

The towns along the Kansas City Southern railway in this county are Anderson, Elk Springs, Goodman, Lanagan and Noel. Pineville, the county seat, is seven miles east of the railway and has about 700 inhabitants.

Anderson, an incorporated town with a population of 950 within the town limits, is the largest trading point in the county. It is south of Kansas City 192 miles and has an altitude of 904 feet. It is a thrifty town and growing rapidly. There are about 150 farms in the immediate vicinity. In an ordinary season Anderson ships fruit, berries, commercial truck, etc., to the value of \$150,000 to \$200,000. The grain, forage

and live stock handled aggregates about \$500,000 per annum. There are in the town the State Bank of Anderson, capital stock \$25,000; a weekly newspaper, two hotels, a fruit growers' association, opera house, waterworks system, public park, electric light plant, telephone system, three churches, two commodious public schools and from fifteen to twenty mercantile establishments.

Elk Springs is 197 miles south of Kansas City and has a population of 75. The altitude is 1,000 feet. It has a general merchandise store, school, hotel and several fruit and berry shippers. It is a famous summer outing resort for several thousand people who come here on account of the beautiful scenery and good fishing water.

Goodman, Mo., is a village of 350 people, south of Kansas City, Mo., 185 miles. Altitude 1,257 feet. About 200 farms are in the immediate vicinity. Shipments from Goodman consist of apples, strawberries, cantaloupes, hogs, cattle, grain, hardwood lumber. railroad ties and mine timbers, poultry and dairy products. The town has several general merchandise stores, a hotel, lumber yard, church, school and a fruit growers' association. The gross annual business of Goodman amounts to about \$100,000.

Lanagan, Mo., has 500 inhabitants, is south of Kansas City, Mo., 195 miles and has an altitude of 854 feet. The general



ROAD CONSTRUCTION, ANDERSON, MO.

business of the village depends upon the agricultural and forest resources of the adjacent county. Fruit growing, general farming and the raising of poultry and live stock constitute the principal business of the people. The shipments in an ordinary year amount to about 500 to 1,000 crates of strawberries, 10 to 20 carloads of apples, 10,000 to 20,000 pounds of poultry, 2,000 to 3,000 cases of eggs, 15 carloads of cattle, 10 to 20 of hogs and from 40 to 80 carloads of mine timbers, props and railroad ties. Lanagan has two general merchandise stores, with stocks valued at \$12,

000, one hotel, one church, one assembly hall and a public school.

Noel, Mo. This is one of the most picturesque little villages in the Ozark region. It is situated in the extreme southwest corner of the State, about two miles north of the Arkansas line and three miles from the Oklahoma line. Its scenic surroundings are beautiful, being located at the junction of the Elk River and Butler Creek, where the two streams have cut through tremendous ledges of solid rocks, affording scenic effect which cannot be duplicated anywhere. Noel is south of



TRAIL OF THE LONESOME PINE, McDONALD CO., MO.



INDIAN CREEK, ANDERSON, MO.

Kansas City 201 miles and its altitude at the railway track is 826 feet. The permanent population is 500, most of whom are engaged in agricultural and horticultural pursuits; the shipments from Noel consist of wheat, strawberries, cattle, poultry and eggs, horses and mules, sheep, hogs, railroad ties and hardwood timbers.

There are in Noel four general stores, a drug store, two hardware stores, a hotel, a club house, a bank, two churches, flour mill and elevator, a fruit growers' association,

commercial club, a good public school, grist mill and several smaller business establishments, all of which appear to be prosperous-

Elk River, on the bank of which Noel is situated, is one of the most famous fishing streams in the State, abounding with game fish, such as black bass, jack salmon, croppie, perch, blue cat, etc. During the summer season hundreds of fishermen come to Noel to fish and have their outings and few places can be found which are better adapted to this purpose.



INDIAN CREEK FORD ONPINEVILLE ROAD, McDONALD CO., MO.

City of Fort Smith

By GEORGE SENGEL. Secretary of the Business Men's Club

Fort Smith, Arkansas, through its residents and business men in every walk of life is firmly convinced that a presentation of facts in reference to the city itself, together with its distinct advantages as a place in which to live and do business, will prove both enlightening and advantageous

to all who visit the city.

To anyone who may contemplate the removal of a plant from a congested field to one presenting flattering prospects; to anyone desiring to get into closer touch with the natural resources, raw materials and a section of the country which is daily demanding more of both the necessities and the luxuries of life—a section which has increased in wealth and population to an extent fairly dumbfounding; to those who have made nothing more than a superficial investigation—to such as these is this story particularly told, simply, honestly and convincingly.

For Smith is geographically situated in the natural and logical center of the manufacturing and wholesale market for the Southwest. It occupies a most strategic position for the control of the vast industrial and mercantile interests which the needs of the rapidly increasing population demand, together with the incomparable and almost fabulous mineral, forest and agricultural resources of the immediately adjacent country. A more favorable location, where sunshine and soil combined with will and work make for the acquisition of health, wealth and a full meed of sustained prosperity it would, indeed, be hard to find.

Fort Smith is located on the Arkansas side of the line separating Oklahoma and Arkansas, the broad-bosomed and pellucid Arkansas river forming a part of the boundary. Eastern Oklahoma provides an immediate and nearby market for Fort Smith goods and the wonderful development of this section since the allotment of the Indian lands and the addition of the Indian. Territory as a part of Oklahoma, has daily added to the wealth of Fort Smith. It embraces the richest section of the new State, and it must, of necessity, do its shopping at Fort Smith. Nine million acres of Indian lands have been thrown open to settlement, fifty new counties have been established and many thriving towns and cities have already sprung up.

Fort Smith has been singularly blessed in many respects, for in its environs it also has a magnificent field of natural gas and semi-anthracite coal. As a matter of bald, unvarnished fact, Fort Smith has the largest supply of natural gas in the Union, and the supply of coal at its very gates is estimated to be sufficient for all possible demands for two hundred years. With respect to the supply of gas it may be stated that seven distinct producing sands are to be found here and that they range in thickness from 40 to 280 feet, their average thickness being 100 feet. They are to be found at a depth of about 750 to 1475 feet. The field has the advantage of being a dry one, there being no showing of water whatever. Wells in this field have been flowing since 1901. There has been no waste, but a strict conservation of this wonderful resource. It is piped into the city only as required, the balance of the supply being kept under stoppage against further needs.

According to Government report both the carboniferous and the tertiary rocks of Arkansas contain extensive deposits of coal, but it is only those of the older system in a field adjacent to Fort Smith that have been exploited and are known to the trade. Fort Smith is almost the exact center of the coal mining industry in this locality, furnishing, as it does, an easy haul to the

Gulf of Mexico.

It seems meet and proper before continuing with a further exposition of Fort Smith's natural resources to pause here and examine into the transportation facilities which the city affords. Fort Smith has nine railroads, with sixteen railroad exits; in fact, it is situated within a veritable network of railroads, for it is touched by the lines of the St. Louis & San Francisco, the Missouri Pacific, the Kansas City Southern, the Arkansas Central, the Iron Mountain, the Midland Valley, the Fort Smith & Western and the Rock Island. No more splendid shipping facilities can be offered by any city in the Southwest, for direct communication is possible in all directions and to all important points. Aside from these railroads, there is a million dollar belt line completely encircling the city, which is maintained for the exclusive use of the manufacturer, and there is not one important industry in the city which is

without its own private switching facilities. And in addition to all this, Fort Smith has the best combination of rail rates, both in-bound and out-bound, of any commercial center in the Southwest.

To the manufacturer the first important question is selling market. There is the "home" market and the "foreign" market. Nowhere is there so great a "home" market as in a new and growing locality, and as has been pointed out elsewhere in this article, Fort Smith offers the very greatest inducements in this respect. Throughout the entire Southwest and in the western and southern territory tributary to Fort Smith, there is a marked business stirring, an increased commercial activity, a building and construction awakening. It is this territory which comprises Fort Smith's "home" market and it is in this territory that Fort Smith's influence is greatest. This influence, increasing so wonderfully in the past decade, it must of necessity continue in the future. And away and beyond all this is the "world" market over which a magnificent system of distribution and a low selling cost gives dominion to the Fort Smith manufacturer.

The cost of living necessarily enters into the subject, and here again Fort Smith makes no concessions to any other community in the country. Foodstuffs are, in the great majority, very cheap. It is doubtful if there is any point in the United States where potatoes may be purchased so cheaply as here. Being in the heart of a great agricultural district, butter, eggs, chickens, etc., may be purchased at an exceptionally low cost, and the same is true of bread. steaks and most of the other food staples. Apples, peaches and berries of all kinds are raised in great abundance in the vicinity and cost but little in the home market when compared with the prices paid elsewhere. It is safe to say, therefore, that the purchasing power of the workingman's dollar for the necessities of life will go as far, if not farther, here than elsewhere, this being due to Fort Smith's proximity to the center of food production.

Fort Smith's supply of water, not only for home consumption, but for manufacturing purposes, is as inexhaustible as its natural gas flow. As has been noted, Fort Smith is situated at the confluence of the Arkansas and Poteau rivers, two of the several navigable streams in Arkansas. The city derives its water supply from the The Poteau rises south of the Poteau Mountain, but within a short distance crosses the State line into Oklahoma. in which the major part of its course is

located. It again reaches the State line near its mouth. A report written by Arthur J. Collier, for the United States Department of the Interior, credits the water with being very wholesome. The pumping station, or waterworks, is adequate to all possible demands for a long time to come and the water rates are very low, as the plant

belongs to the city.

Fort Smith enjoys an enviable reputation in the outer world, and some of the largest monied interests in the country are interested in its upbuilding. It is built upon a firm business foundation; it is clean and healthy, and its surroundings make it one of the finest cities in all the world in which to live. It has an ideal location for the building of a really great city. It is already the metropolis of the Southwest and just so certain as the Southwest is destined to blossom into one of the fairest and finest of the jewels in the nation's diadem, just so sure is Fort Smith to increase in prosperity and to multiply in population.

But a few decades ago Fort Smith was an "outfitting post." In other words the hardy immigrant here supplied himself with the final necessities for his westward journeyings into the virgin plains of the Farther West. Today Fort Smith is the most important jobbing center of the Southwest, the site of any number of important jobbing concerns that are meeting the competition of eastern and northern houses and "getting the business." The jobbing trade of Fort Smith approximates \$40,000,000 annually, and is steadily increasing. A journey into the wholesale district of Fort Smith is in itself a sermon of progress and prosperity. The jobbing interests are ever alert to the city's best interests and have been a powerful factor in the city's upbuilding.

The approximate value of Fort Smith's manufacturing output per annum is \$40,-000,000, and here likewise, is a steady gain being recorded. There are cotton oil mills, cotton compresses, powder, broom factories, the largest wagon plant west of the Mississippi, a large refrigerator plant, trousers, overalls, nine furniture plants, thirty-three wood working plants, bed and couch factory, big brick plants, one of them being the largest west of the Mississippi; two foundries, cracker and biscuit factory, harness and saddlery plant and planing mills, in fact industries too numerous to mention. but which are meeting only partially the demands and requirements of the southwestern trade. There is room for many, many more. It has every advantage to offer the manufacturer with none of the drawbacks

which so frequently are found to attend the apparent advantages of other communities. It wants factories and is prepared to meet the prospective locator half way or a little better.

It is but natural that the prospective locator should inquire into the merits of Fort Smith as a place of residence. No city in the Southwest offers greater advantages in this respect. There is a very commendable disposition, now more manifest than ever, to make it a city beautiful. It has one very unique advantage in this direction, for the "smoke nuisance," which is such a bothersome problem in almost every other municipality in the country, is here absolutely unknown. This is due to the fact that natural gas and semi-anthracite coal, which is smokeless and which is found in fairly inexhaustible abundance within the limits of Sebastian County, furnish fuel not alone for the homes, but for manufacturers, hotels, office buildings, etc. It is Fort Smith's proud boast that one can hold a spotless handkerchief over nine out of ten of the city's smokestacks and bring it away unsullied.

Fort Smith also enjoys another unique distinction; it is the only city in the United States to award at one time a contract for the paving of all of its streets. This contract involved the improvements of about seventy-two miles of public thoroughfares.

Fort Smith has yet another unique claim to distinction for, so far as is known, it is the only city in the United States possessed of an endowed public school system. Its schools have the benefit of a fund which has now reached a total of more than one million dollars, and all of its buildings, valued at approximately a million, have been paid for out of this endowment. Fort Smith has a magnificent school system, its high school is its pride and joy, its grade schools are modern, fireproof structures and adequate to all possible demands for some years to come. For maintenance purposes a school tax of five mills per annum is imposed, but exclusive of this maintenance tax Fort Smith's splendid school system costs its tax payers not one cent.

From a purely aesthetic viewpoint, Fort Smith has kept pace with the same phenomenal advancement which the city has shown along other lines. There are residence sections which are veritable parks, the homes generally are of prosperous appearance and of pleasing architectural design. Beautiful lawns and magnificently shaded streets contribute to the general result, and to say that it is a result exceed-

ingly pleasing to the eye and most gratifying to the visitor's aestheticism is to put it mildly. On the outskirts of the city, particularly on the Free Ferry Road, are to be found a large number of exceptionally palatial suburban homes which, in the main, are surrounded by spacious grounds of something more than passing beauty. Fort Smith is proud of its beautiful homes, and well it may be.

Summing Up the Story.

Let us recapitulate some of the important facts concerning Fort Smith. It vies with Memphis as the largest and best lumber market in the South or Southwest, and the largest timber preserves in the world are contiguous to it.

It is the greatest jobbing center of its size in the world, its wholesale establishments employing three hundred traveling salesmen.

Its death rate has shown a steady decline in recent years, though its increase in population has been nothing short of phenomenal.

The Southwest, of which Fort Smith is the gateway, produces one-third of the cotton raised in the United States.

It is the garden spot of Arkansas agriculturally, and the commercial metropolis.

As a furniture manufacturing and wood-working center it is greater than all the other cities of the Southwest combined, and this is also true of its clay and shale working interests.

As a commercial center it is supreme.

Fifty-one towns within a comparatively small radius have a daily train service to and from Fort Smith.

There are thirty-five miles of dirt and macadam roads within the township, and others are being built at the rate of ten miles per year.

There are thousands of men and women who are looking forward to the establishment of a home of their own, who are anxiously searching for the best oppor-tunities. There are many, many manufacturers who would move if they could but find sites where they would be assured of low production cost and a good selling market. To all such we present the facts herein contained for careful consideration. Fort Smith is not a place where wealth can be acquired without effort, neither is it an earthly paradise whose streets run with milk and honey. It is not altogether free from the inconveniences and obstacles with which mankind in general have to contend. but it can be said that the city offers one of the greatest opportunities of the century to industrious, thrifty persons to secure a home, a business and a competence in a most desirable locality, and in a community especially endowed by nature with peculiarly favorable advantages for health, wealth and prosperity.

The Manufacture of Ice

The Siloam Springs Ice and Water Co.

One of the most important factors in the growth of Siloam Springs, Ark., is its splendidly equipped ice and cold storage plant. This plant has a capacity of fifty tons of ice per day, and a cold storage capacity of five hundred tons. The product is well and favorably known at many towns along the Kansas City Southern Railway in the ordinary way of business, and in fruit shipping time, when several thousand car loads of perishable fruits and vegetables must be iced and re-iced, its principal product, ice, is in good demand. From April to the end of the great annual fruit movement in 1915 eighteen hundred and forty-seven car loads of fruit were iced and re-iced at Watts, Okla., Siloam Springs and other stations by this company. The ice used for this purpose alone Great quantiamounted to 2,889 tons. ties of ice are consumed in other ways. Apples and other fruits and various commodities originating at many points in the Ozark region are kept here in cold storage to be released when the market demands the goods.

There is no ice manfactured which is more pure than the product of this company. The waters of Siloam Springs have been famous for their purity many years. Many thousands of people have come to Siloam Springs entirely on account of the purity of the waters, the fame of which as a health restorer extending far beyond the borders of Arkansas. Water from Siloam Springs is used in many towns in Missouri, Kansas, Oklahoma, Louisiana and Texas. In the manufacture of ice, this naturally pure water is doubly distilled before it is frozen.

The manufacture of ice is an interesting process, but little understood by the general public. The theory of manufacture is based on the fact that any substance converted from a solid form to a liquid form, or from a liquid form to a gaseous form, must absorb heat to bring about the change in form and that in the reverse process, changing a gas into a liquid, or a liquid into a solid, heat must be thrown off to effect the change in form.

An ice making or refrigerating plant is simply an apparatus for taking the heat from one place and delivering it in another place. Heat is known as "sensible heat" above the point at which a substance changes form; below that point heat is latent heat. Water at 33 degrees Fahrenheit has "sensible heat." At 32 degrees it has "latent heat." When water is at 32 degrees Fahrenheit, or the temperature at which it freezes, some of the "latent heat" must be removed to bring about the change in form, converting a liquid into a solid. It requires the removal of one heat unit to reduce the temperature of one pound of water one degree, but 144 heat units must be taken out of one pound of water at 32 degrees Fahr, to change it into ice at the same degree of temperature.

The mechanical arrangements to secure the necessary changes in temperature consist of a large shallow tank, through which run coils of pipes connected with a powerful pumping plant. In this tank are set the steel ice cans, each capable of holding 200 pounds of ice, and filled with pure distilled water. The tank itself is filled with a strong salt brine which surrounds all the steel ice cans and the coils of pipe.

The pipe system in the tank is constructed to carry a pressure of 1000 pounds to the square inch and remains absolutely tight under this pressure. It might be compared to a steam or hot water heating system in a dwelling or office building, steam or hot water circulating within the pipes, which are supposed to be steam and water tight. Ammonia is a gas at the normal temperature. It will boil at 29 degrees below zero in the air. Under high pressure it will not boil except at a much higher temperature. The latent heat of ammonia, that is, the heat it will absorb when changing from a liquid to a gas, is about 550 units. Ice absorbs only 144 units in changing from a solid to a liquid. On account of its high latent heat ammonia can be utilized by alternately changing it from a gas to a liquid and then changing it from a liquid to a gas by absorbing a large amount of heat from its immediate surroundings. The refrigerat-

ing apparatus has a pump or compressor, and the pipe system in the tank which acts as a condensing or liquifying coil. The compressor compresses the ammonia gas to a pressure under which it becomes a liquid. The condenser coil has water flowing over it continually and this carries away the heat given off while the gas becomes a liquid. The pressure used is from 150 to 200 pounds per square inch. The liquid ammonia then flows to the ice tank Here it is forced through a very small opening under a pressure of about 200 pounds per square inch. Emerging through the opening it encounters a pressure of only 15 pounds under which it again becomes a gas at zero Fahrenheit. It immediately begins to absorb the latent heat from its surroundings, in this case the strong brine in the tank. The temperature of the coils is zero. This temperature is low enough to abstract the heat from the brine and this in turn the heat from the pure water in the ice cans. The brine being specifically heavier than the pure water does not freeze at the same degree that pure water does.

As rapidly as the ammonia turns into gas it returns to the pump or compressor to be recompressed and follow the course above described. By continually carrying away heat the water is finally frozen.

All water, whether raw or distilled, contains more or less air, and if frozen in the ordinary ice can, the air would form numberless bubbles, which would make the block of ice as white as a block of marble. The general public demands clear ice. To overcome this difficulty a system of pipes is arranged over the ice cans containing the

pure water. A tube is suspended into each can from this system of pipes, so that air under slight pressure, derived from an air compressor, is constantly blowing through the tube in the water and keeps it in a continual state of agitation. On first thought it would seem that more air would simply add to the amount already in the water, but the violent agitation causes all the air to rise to the surface and be lost in the atmosphere. The air has a tendency to form in bubbles on the ice surface as it grows in thickness from the sides of the cans, but the air agitating process disturbs these bubbles, causing them to rise to the surface.

The method of cooling a cold storage room, drinking water cooling plants, hospitals, hotels, skating rinks, is the same as that used in making ice. The latent heat is simply abstracted from the atmosphere in an enclosed space, with the desired results.

Artificial ice should always have preference over natural ice for private use. Its purity cannot be questioned. The natural product is not always pure, and frequently contains dirt and harmful bacteria. It is a mistake to suppose that freezing under natural conditions is sufficient to destroy bacteria; in fact, it never does. In the distillation process all bacteria are killed first and then eliminated.

The Siloam Springs Ice and Water Co., in addition to its ice and cold storage plant, maintains a well equipped bottling plant and is a large producer and shipper of carbonated beverages, as well as of pure water and wholesale ice cream.

The Griffing Brothers Nurseries at Port Arthur, Texas

Every grower of trees, vines and shrubs in the North country, knows what a nursery north of the Ohio and Arkansas rivers ought to have in stock and he would not think of looking there for exotic plants. The Northern nursery is naturally equipped with plants, trees, etc., adapted to the section of country in which it is located, and which practical experience has demonstrated will do well and are suited to the climatic conditions.

Nursery stocks in Southern latitudes are selected with equal care, and are based on past experience. Certain fruits, which prosper in a rigorous climate, among them varieties of winter apples, would be unsatisfactory in a Southern climate, but compensation is had in other fruits, which do splendidly in the South and fail in the North.

Many varieties of fruits are common to both sections of the country, but have become acclimated, each to its own section. Northern grown nursery stock of identical varieties frequently becomes unreliable when moved far south and the same variety moved from near the Gulf Coast to near the Canada border frequently lacks the hardiness to survive the rigorous winters.



PACKING HOUSE, GRIFFINGS NURSERIES, PORT ARTHUR, TEXAS

The point was practically demonstrated some years ago in the Texas Panhandle. Two nursery companies, one from northern Nebraska, the other from southern Texas, not far from the Gulf Coast, jointly requested the use of a piece of railroad land, on which they agreed to maintain a display of trees, vines and shrubs for two years. An equal number of plants were set out in the fall. Many of the plants were of the same variety, as both nurseries propogated them. All the plants remained dormant until February, when there came a week or ten days of warm weather. By the middle of the month all the Nebraska nursery stock was budding and full of sap, but the south Texas stock was still dormant. About the fifth of March came the usual Texas norther and every plant from Nebraska was killed by frost. The Texas stock did not bud until the middle of March, and was growing thriftily years afterward. The gist of the story is that the Texas stock had become inured to the vagaries of the Texas climate and a few warm days made no impression on the plants. The Nebraska stock, inured to continued cold weather at home, promptly responded to the warm weather and perished. In Nebraska these trees would not have budded until spring had actually arrived.

A Southern nursery catalogue furnishes somewhat different reading, from that issued by a Northern nursery. The Griffing Brothers Nurseries, at Port Arthur, are the largest in the South. They have branch nurseries at San Benito, McAllen, and Nona, Texas; Grand Bay, Alabama; and Jacksonville, Macclenny and Fort Pierce, Florida. While primarily operated for the propogation of commercial fruit trees and plants, the mild winters of the South make it desirable to grow many ornamental trees and shrubs which are always in demand. Added to these are many subtropical fruits which yield well in southern Texas and Louisiana.

Instead of beginning their catalogue with a list of big red apples and other kinds of apples, all beautifully illustrated in the Northern catalogues, the Griffing Brothers catalogue and those of other Southern nurseries begin with a list of hardy oranges. which may be profitably grown in southern Louisiana and Texas. The Satsuma orange is the hardiest known orange, maturing before frosty weather is due. The Mandarin and Tangerine oranges belong to the same Following these are other hardy oranges, known as Boone's Early, Louisiana Mediterranean Sweet, Pineapple orange, Valencia Lake, Washington Navel. the Dugat and the Lue Gin Gong. All of these thrive along the Gulf Coast and within 150 miles thereof. While nearly every farm and many city lots have these orange trees for home consumption, there are numerous commercial orchards and Louisiana and Texas oranges now reach the Northern markets. Grape fruit, in five varieties, lemons,



GREENHOUSES, GRIFFINGS NURSERIES, PORT ARTHUR, TEX

limes and kumquats, in several varieties each, complete the list of citrus fruits.

Next come several pages devoted to pecan culture. Fifteen varieties are listed, some of them more than an inch thick and more than two inches long, most of them with shell so thin that they can be crushed in the hand. Then comes a list of chestnuts, almonds and Japan walnuts, all of which nuts are profitably cultivated.

Nine varieties of figs are listed. No variety of fruit is more easily grown than the fig and in the past ten years many hundreds of acres have been planted. Every

year brings new canneries and where grown commercially in connection with a cannery, the culture yields a handsome profit.

The Japan persimmon is a handsome fruit and yields prolific crops as far north as Red River. This fruit appears in the northern markets and is meeting with favor. Twelve different varieties of Japan persimmons are listed.

Peaches do well in Louisiana and Texas and forty varieties are mentioned, as well as fifteen varieties of plums. Among the peaches and plums are many of Chinese or Japanese origin. Plums are indigenous in



RESIDENCE GRIFFING BROS. NURSERIES, PORT ARTHUR, TEXAS



PAPER SHELL PECANS

Texas and Louisiana and any variety, properly cultivated, will do well.

Of pears there are nine varieties, and of apples ten varieties, which will do well in the South. Most of the apples are early maturing varieties.

In addition to the foregoing are long lists of blackberries, mulberries, loquats, guavas, alligator pears, mangoes, bananas, grapes, both European and domestic varieties.

Among the shade and ornamental trees are the Ever Green Ash, Australian Silk Oak, Camphor Tree, Wild Peach, Eucalyptus in several varieties, Holly, Magnolia, Japanese Varnish, Soap Tree, Salt Cedar, Chinese Tallow, Texas Umbrella Tree and many others. All the conifers are represented and the list of evergreen foliage and flowering shrubs is so large that it cannot be given here.

Roses do exceptionally well in Texas and Louisiana and Griffing Bros. list covers practically every known variety worth cultivating. The list of exotic plants covers several varieties of Palms, Palmettos, Date Palms, Cocoanut Palms, Sago Palm, Chinese Fan Palm, Spanish Bayonette, Yuccas, Sisal Fibre Plants, Century Plants and a long list of vines and creepers.

Many of these would be out of place in a Northern nursery catalogue, but as all of these plants, except bananas, can be in the open all year around and the people are fond of their gardens, there is a steady demand for them. In the North many of the plants mentioned here are grown in greenhouses and some are house plants. People visiting Port Arthur, Tex., or Beaumont, should by all means visit this nursery and its greenhouses. The Griffing Brothers nurseries began business twenty-six years ago in Florida and in this time developed a thorough knowledge of the horticultural conditions of the South. Their Port Arthur nurseries are among the largest and most perfectly equipped nurseries in the South. Their stock of trees is very large and complete, covering all varieties adapted to Texas, Louisiana, Arkansas and Oklahoma.

Agricultural Development in the Port Arthur Section of the Gulf Coast

A. E. GROVES, Madison, Wisconsin

In 1897, the Kansas City Southern Railway, then known as the Kansas City, Pittsburg & Gulf Ry., had completed its line to Port Arthur, at that time a straggling town of a few hundred people, located in a cow pasture fronting on Sabine Lake. A deep water canal had been dredged through the land from Sabine Pass to Taylor's Bayou, so that ocean vessels could be loaded at the Everything in and about Port Arthur was new and practically untried and the future of the city was, at the time, a speculative proposition. The new railway had given access to a vast timber area containing enormous quantities of yellow pine lumber; beyond this were immense supplies of cotton and farther north a vast stretch of country producing grain and livestock, as well as manufactured commodities. In the course of time these resources would be developed and find their way to foreign and coastwise ports through Port Arthur as the export gateway, but all this was in the future.

The development of the adjacent country, at that time an open prairie country used as stock range, appeared to be the most necessary thing to be done at first. The cultivation of rice and the tillage of small tracts by intense farming appeared to be the most promising possibilities. The Port Arthur Land Company acquired title to 42,000 acres of land surrounding the new port and became the chief factor in the argricultural developments in this locality. Lands were sold to actual settlers, many of whom were from Holland and who formed a colony. A large experimental farm was established and cultivated. Intense farming was practiced by many of the Hollanders. Rice culture, at the time, appeared to be an attractive proposition and nearly all farmers in this section engaged in it. A huge pumping plant was installed on the Neches River and an irrigation canal system was constructed. Rice mills were built at Port Arthur and Beaumont and in a short time rice culture became the engrossing pursuit of the rural population. The cultivation of this cereal still flourishes, but not to the extent it once did. Most of the farmers had made the cultivation of this crop their sole dependence and within a few years were brought to the realization that a one-crop proposition is an uncertain factor wherever tried. During the development of the rice growing industry, farming by intense methods declined for a time. Many of the old rice farmers, reduced or eliminated their rice crop and devoted more attention to a variety of crops, particularly forage and the raising of fine livestock and owing to a largely increased population intense farming, the production of fruits and commercial truck, has again become an important factor. It was found, after many practical tests, that land deemed good only for the cultivation of rice, would produce fine crops of corn, cotton, cowpeas, alfalfa, sugar cane, sorghum, potatoes and other crops; in fact, the soils of this section were found to have a wonderful versatility of resources. The average rainfall is ample to bring all crops (except rice) to maturity and the long growing season permits the cultivation of crops from January to December. Plows are in constant use from the beginning of the year to the end.

The staple crops of the Port Arthur section are rice, corn, cotton, sugar cane, Irish and sweet potatoes, sorghum, hay and practically all well known farm crops ordinarily grown in the Central and Southern States. The preferred commercial truck crops profitably grown are cabbage, onions, cauliflower, turnips, radishes, rutabagas, letuce, spinach, tomatoes, beans, cucumbers, cantaloupes, watermelons, egg plants, green corn, peppers, etc., usually produced from six to eight weeks earlier than in any of the Central States. These crops find a ready market at high prices during the winter and early spring.

Fruits and nuts do well in this section and orange and fig orchards can be found in many places. Oranges, grape fruits and other citrus fruits, figs, peaches, plums, pears, grapes, Japanese persimmons, mulberries, strawberries, loquats, pomegranates, pecan trees and small fruits are found on most farms and city back yards; pecans, oranges and figs predominating. All three of these and including the strawberry plantings are commercial propositions. orchards near Beaumont, where there are two canneries, return a revenue of \$100 to \$300 an acre, depending on the age of the The fig is a delicate fruit which orchard. will not keep long after picking and in

order to handle it commercially, a preserving plant or cannery must be within convenient reach.

The pecan is a native Southern forest tree, is hardy and will reach the age of 100 years. The large paper shell pecan is the variety grown for profit. It commences to vield about the sixth year and two years later is profitable. A seven year old tree will yield 189 pounds of nuts; eight years, 283 pounds; nine years, 388 pounds; ten years, 607 pounds; eleven years, 945 pounds; twelve years, 1,575 pounds.

Orange groves are paying investments. The Satsuma orange, budded on the citrus trifoliata root, will withstand a much lower temperature than any other variety of oranges. The Louisiana Sweets, a variety peculiar to the lower Gulf Coast, has been successfully grown for many years without injury from freezing, but the Satsuma is the preferred variety. The profit from an orange grove ranges from \$200 to \$1,000 an acre. Strawberries yield a revenue of \$100 to \$400 per acre and the ordinary truck crops will run from \$50 to \$200 per acre, depending upon the time of the year they are harvested.

The development of agriculture in the Port Arthur section was not a steady process. In January, 1901, the famous Lucas oil well was brought in and created an intense interest in the future development of the country between Beaumont and Port Arthur as an oil field. Hundreds of other wells were bored and because the extent of the oil field was unknown, land values became too high to interest farmers. Two or three years passed before land values came back to normal figures. New people arrived in train loads from all directions, but these new comers had no interest except that of oil development. Large industries began to build up at Port Arthur and Beaumont, the oil manufacturing industry being the greatest of them all. Port Arthur now has two of the largest oil refineries in the world and a population in excess of 16,000. Beaumont, in consequence of the oil development, increased its population from 8,000 to more than 31,000.

In 1914 Port Arthur had, among other institutions, a grain elevator with a capacity of 450,000 bushels; the Gulf Refining Company's refinery, the largest independent refinery in the world; two immense refineries operated by the Texas Company, with a monthly pay roll in excess of \$350,000; seven miles of street railway; the Port Arthur Rice Mill; Griffing Bros. Nursery, one of the largest in the South; two modern ice plants; an in-

terurban railway line between Port Arthur and Beaumont; one of the largest and most attractive pleasure piers in the South, costing approximately \$200,000; the Plaza Hotel, among the best in the South, with a beautiful park facing Sabine Lake: a gas plant costing \$100,000. Port Arthur College and Dormitories, High and Manual Training School, and five other commodious school buildings. The imports for the fiscal year ending June 30, 1914, were valued at \$1,919,132, the exports at \$25,167,446 and the coastwise outgoing traffic at \$62,236,894. The total number of vessels entered and cleared during the year was 1,108.

Today Port Arthur is a rapidly growing metropolitan city, with new houses constantly in demand and a population increasing from day to day. Port Arthur is second to no other port on the Gulf in the export of lumber, oil, cotton, cotton seed products. grain and packing house products. The completion of the Panama Canal has placed the business of this port in a direct line with the commerce of the world.

The development of the commercial and industrial resources of Jefferson county naturally resulted in a large increase in the demand for food stuffs for man and beast, an exceptionally good home market was provided and the intensely cultivated small farm now has its day. They are now more numerous than ever near Port Arthur, Nederland and Beaumont, yet they supply only a small part of the food stuffs consumed. At the present time a large part of the produce consumed is shipped in from other localities. This section now needs more dairy farms, more truck farms and more poultry farms. The resident farmers have endeavored to meet this demand, have mended their ways in many things and improved their methods, are building silos. planting orchards, improving their livestock. etc., but cannot keep up with the demand.

The greatest effort in horticultural lines was made by the Griffing Brothers Nursery Co. of Port Arthur, who in 1911 and 1912 planted 340 acres near their nursery plant to pecans, oranges, figs and peaches. This year, 1915, many of the trees were bearing and by next year nearly all the trees except the pecans will produce fruit. This orchard is known as "The Groves" and is the show place of the Port Arthur district. This undertaking acted as a stimulant on the land owners of the vicinity and several larger holdings have been cut up and planted in orchard or devoted to commercial truck growing. Land convenient to town and railroad is valued at \$100 per acre, an orchard tract planted and in bearing about \$300 per acre. Rice land \$50 to \$75 and general farming and lands for raising cattle from \$30 to \$50.

Jefferson county has a magnificent system of public roads and is traversed by

several railroads and a suburban electric line. Land values are to some extent governed by their proximity to the roads and railroads and to the towns which have a great industrial population.

Shreveport, La., and the Jefferson Highway

The Rotarian Club of Shreveport meets frequently in the course of a month to consider propositions affecting the welfare of the city. The range of subjects under discussion is wide and covers everything likely to be of interest to the city. At the meeting of December 10, 1915, Mr. J. T. Bullen, who is vice-president and director for Louisiana of the Jefferson Highway Association, addressed the club and called its attention to the importance of the great Canada to Gulf highway, now being located by the Jefferson Highway Association.

After reciting briefly the history of the Jefferson Highway Association and what was done at the recent conference in New Orleans, Mr. Bullen turned his attention to the importance of the highway as it affects Shreveport.

"The answer to the question of what the highway is to be and wherein it is important to the cities through which it passes is simple," he said. "It is estimated by people in position to know whereof they speak that 6,000 cars made the trip across the continent this year. Up to 1913 only twenty cars had made the transcontinental trip and at that time it was regarded as a feat of great endurance and skill. The agitation for the Lincoln Highway from coast to coast and its construction for a large part of the way brought the number of transcontinental trips up to the figure given and toned down estimates of the strength and endurance and skill necessary to make it to practically nothing. Only recently the trip was made by a moving picture actress driving her own car.

"This same agitation has brought about the making over of 80 per cent of the routes traversed, and in many cities along the line the road is traced through the streets by handsome concrete posts bearing a medallion of Lincoln.

"The Jefferson Highway will accomplish similar results. It will stimulate the construction and maintenance of roads all along the route and encourage the construction of lateral roads of the same character.

Great Advertising Value.

"The advertising value of the road is great. Mr. Currie, secretary of the local auto association, tells me that he routes an average of fifteen cars a week through Shreveport and an average of one car a day for every day in the year. With Shreveport on the main highway connecting the Red river of the North with the Red river of the South, and the citizens of snowbound Dakota and other Northern States with the balmy, romantic country of Evangeline, this average will be increased tremendously.

"If there is any means in our power of encouraging the counties of Western Arkansas to join in with us and help us change the route of the highway as at present outlined, we should employ it. At present the route takes the road too near Dallas. I understand that Fort Smith and Texarkana. Arta, and Joplin, Mo., are busy creating a sentiment for the construction of good roads to be incorporated into the highway, and we should do all we can to swing a majority for Shreveport when it comes time to settle upon the route. At present it is proposed to locate the road from New Orleans to Baton Rouge, Alexandria, Shreveport, Denison and north to Kansas City through Oklahoma. We should do what we can to have it built from Shreveport to Texarkana and Fort Smith, and then perhaps through Oklahoma to Kansas City."

Easy Money in Stock Raising

The cheapest pasturage in the country, the most favorable climate for the industry, the absence of speculation and the certainty of profit with a reasonable degree of care and work were some of the advantages Shreveport and vicinity offers the live stock breeder, as outlined in an address by Mrs. A. R. Mayer before the Rotary Club December 10th. Mrs. Mayer's observations were based upon her own experience in cattle raising on the Shreve Island farm. She is one of the three best known breeders of thoroughbred registered Polled-Durhams and Shorthorn cattle in the South.

"People are slow to grasp or to realize the opportunities for sucessful and profitable cattle raising in this vicinity," she said in the beginning. "In no place in the United States can cattle be raised at less expense than they can in the country surrounding Shreveport. In the North and West climatic and other conditions are not as favorable as in Louisiana, where we have nine months of native green pastur-Supplement this natural grazing with a crop of winter oats and corn and the by-products of the oil mills in and immediately adjacent to Shreveport and the feeding question is about settled. About the only cash outlay the breeder is subject to is for cotton seed meal, which has been proved to be the best meat builder available and is equally good as a food for dairy cattle. In other States not so fortunately situated as Louisiana, the breeder, especially in the North, has to plant special forage crops in quantities sufficient to last his herds through the long, hard winters.

"Shreveport is near the greatest cattle markets of the South, New Orleans, Fort Worth and Kansas City, and with improved shipping facilities will eventually enjoy the full benefits of its location.

A great drawback to the industry is the cattle tick, the cause of Texas fever, the greatest enemy the cattle raiser has to combat. They city man has no idea of the extent of the damage done by this pest, or of the importance of fighting it. However, since the introduction of the dipping vat system into this parish and the active co-operation of the parish authorities and the United States Department

of Agriculture the devastation done by the cattle tick has been greatly reduced.

"Great advance in tick eradication work has been made in Caddo parish, but adjoining parishes should be brought into the area covered by these activities, and I would suggest that the Rotary Club exert itself in carrying the work into Bossier particularly.

Dual Purpose Cow Best.

"There is very little, practically no speculation in the business, but for strictly local conditions the dual purpose cow offers. the best inducements for the stock raiser, as she combines the good points of dairy cattle and beef stock. On the Shreve Island farm we raise registered Polled-Durhams and Shorthorns exclusively, and the demand for them is always larger than we can supply and the prices commanded range from \$250 to \$500 per head for yearlings. As we have natural pasturage for the greater part of the year and can store enough silage grown on the place to last through the months pasturage is not available, it is easy to see how profitable the business is for anyone who will go into it on a business basis.

"My advice to any man with a farm in this section is to buy and breed cattle; always, of course, with the understanding that he handles good stock. Cattle offer good profits in two ways-in sales and in rehabilitating run-down lands. That there is a great awakening throughout the South to the profits to be made in the industry and that more attention is being paid to it is indicated in the various state and county fairs. The city man cannot realize all that these fairs have done to stimulate it, and cannot guage the interest that is being taken in it, but persons interested in cattle can. It might surprise some to know that some of the prize-winning herds exhibited at the International Stock Show held every year in Chicago are shown here at the Louisiana State Fair.

"With respect to Shreveport in particular, I would say, fortunes have been made through investing in oil stocks, but my advice would be to buy live stock."

Mrs. Mayer was busy answering questions regarding the industry quite a few minutes after concluding her address.

The Apple Crop at Bentonville, Ark.

H. E. WOODS, Bentonville

The apple is a fruit grown over a large area in northern Arkansas, but is centered principally in Washington and Benton counties. Of these two counties, Benton county produces several times the quantity produced by her adjacent neighbor. There are large areas in Benton county, which are not esteemed as good for the production of fruit; principally the broken lands or hills. The greater part is high plateau land, which is highly productive. None of these plateaus are more fertile than the large one in the center of the county. This, the Bentonville Plateau, has made Benton county famous as the "Big Red Apple County."

This plateau is about sixteen to eighteen miles long and about ten to twelve miles wide, and is skirted by four railroads, one on each side, viz., the Kansas City Southern on the west, the Kansas City and Memphis on the south, the St. Louis & San Francisco on the east and a branch line of this system on the north. Along these railroads are some ten or twelve shipping points, which handle apples in large quantity and numerous smaller places which ship several carloads each. These shipping points draw their fruit from within a radius of four to six miles.

Bentonville is one of the leading apple shipping towns on this plateau. The fruit is drawn from a small radius of about three and one-half miles and only from three sides, there being a hilly area adjacent on the north.

The Government estimate of the apple crop as a whole, for the state of Arkansas in 1914, was about 5,000,000 bushels and of this crop Bentonville handled about one-third of a million bushels, equal to about one-fifteenth of the apple crop of the whole State. In this estimate are included the freight and express shipments of the better grades, the fruit in storage and that handled by the evaporators, distillery and cider mills.

About 225 carloads, or 122.400 bushels were shipped by freight trains, not including local shipments, which amounted to approximately five carloads. This would bring the total shipments up to 230 carloads or

124,800 bushels. The shipments by express amounted to 2,972 bushels.

The cold storage plant has a capacity of 20,000 barrels or 60,000 bushels and was filled to capacity The shipping apples brought the growers from \$2.00 to \$3.00 per barrel. The Ben Davis and kindred varieties averaged \$2.25 per barrel, while the select varieties brought from 50 cents to 75 cents per barrel more.

The distillery purchased about 50,000 bushels at an average price per cwt. of 17½ cents, or 8¾ cents per bushel. This quantity of apples made about 25,000 gallons of brandy, or 500 barrels of 50 gallons each. In consequence of an act of the legislature the distillery ceased operations at the close of the year. The cider mill used about 1,500 bushels, at 20 cents per cwt., or 10 cents per bushel. Six thousand gallons of cider were made and sold at 20 cents per gallon. The mill was operated only during the last week or so of the gathering season.

The evaporator business consumed 130,000 bushels or 6,500,000 pounds of green apples, purchased at an average price of 25 cents per cwt., or 12½ cents per bushel. The total output was approximately 812,500 pounds of dried fruit. The selling price of this dried fruit varied so greatly that an average estimate can hardly be made. The season opened up at 8 cents per pound, but dropped to 4 cents per pound, thereafter going up and down from 3½ cents to 5 cents per pound.

The total of all grades of fruit (apples) gathered within a radius of 3½ miles of Bentonville was 308,000 bushels.

The reader might infer from the foregoing figures that we make a specialty of growing inferior apples, since we sold so much to the evaporators and other industries which use culls. No apple crop is perfect, and every year thousands of bushels go to these plants, but last season (1914) sent a larger percentage there than usual. The reason for this condition was that the buyers of the shipping apples, offered so little for the perfect fruit, that many growers, shook their fruit from the trees and took all grades to the evapora-

tors, without going to the trouble and expense of sorting the perfect fruit from the culls.

Our Arkansas apples nearly always bring a good price, but last year was an unexpected exception. The outbreak of the European War caused an uncertain market and an over-abundance of apples in nearly every apple producing section in the United States, resulted in prices too low to warrant the expense of careful selection and shipment of a large part of the crop. This condition probably made no difference to the retail buyers in the large cities, who probably paid top notch prices as usual for their purchases.

New Colonization Enterprises

The manufacture of vellow pine lumber may be safely said to be a vanishing industry in Louisiana and Texas. Twenty years of continuous manufacture, with many mills capable of sawing 150,000 to 200,000 feet of lumber per day, cannot fail to tremendously reduce the quantity of standing timber. In fifteen or twenty years other sources of supply for building material will have to be sought. Several million acres in Louisiana have been denuded of their timber, but the surface of the country so denuded has not been replanted or covered with crop bearing farms, except in comparatively few places. The mills are now cutting to their capacity, and the faster the timber is cut, the sooner will come the end of one of our greatest industries.

The first systematic effort to colonize the cut-over timber lands in Louisiana along the Kansas City Southern Railway Co. was undertaken by the Pineland Mfg. Co., who settled about one hundred families near Pickering, La., in Vernon Parish.

In 1913, 1914 and 1915 the American Farm Land Company, of Kansas City, Mo., located on their lands at Carson and Orretta, La., 125 families, in all about 600 persons. Two small prosperous towns have resulted from this effort, and in all 47,000 acres of land have been settled upon by well-to-do northern farmers, each of whom had a good working capital to begin operations with.

The year 1916 will witness unusual activity in colonization work in Louisiana. The largest of the new colonization undertakings is that of the Long-Bell Lumber Company, which will colonize one hundred thousand acres of the cut-over lands in Beauregard Parish, La., and has two hun-

dred thousand acres more available in adjoining parishes. The land was placed on sale January 1, 1916, and is now open to purchase. All the land has been surveyed and classified, and was in December visited by twenty editors of farm and agricultural publications. The editorial party spent some ten days on the lands, visiting many of the existing old farms and studying the agricultural history of Southwestern Louisiana. The Long-Bell Lumber Company will now vigorously push its immigration work, and it is a safe proposition to say that there will be several hundred new farms in Beauregard Parish by the end of 1916. The lands offered will be low in price as compared with northern farm values, but in point of revenue producing capacity are equal to the lands in any northern locality. Further information concerning this enterprise can be had by addressing Mr. F. W. Cornwall, care of Long-Bell Lumber Company, Kansas City, Mo.

The L. G. Byerley Land Co., of Kansas City, Mo., is colonizing some 20,000 acres at Zwolle, Sabine Parish, La. Quite a number of settlers are already on the ground.

At Lake Charles, La., the Mutual Land Company has been incorporated with a capital stock of \$100,000. This is a corporation of land owners, who formed the organization, to which they deeded their lands, in order to facilitate the colonization of the same. The acreage owned by the company is 14,320 acres, most of it cut-over land formerly owned by the Hodge Fence and Lumber Company, the Marken Tram Company, the Bear Creek Lumber Company and several individual owners.

The colonization of these lands is conducted by C. P. Fullington and Company, of Lake Charles, La., who have placed some forty families on these lands, and have

good prospects of colonizing all of the land within a reasonable time.

The Prairie Farm Land Company, of Lake Charles, La., incorporated with a capital stock of \$200,000, has acquired the lands of the Ogden estate 39,797 acres of prairie lands in the immediate vicinity of Lake Charles. This company will undertake the colonization of its lands during the present year, and has already placed the lands in market.

The Mining Industry

The United States Geological Survey is now compiling its annual report. From the information available it appears that the output of 1915 was a record breaker, and that the total value may reach two and one-half billion dollars.

The copper mines passed all records for previous years, the 1915 output having a value of \$236,000,000, or \$83,000,000 more than the value of the production of 1914. The output amounted to 1,365,500,000 pounds, or more than 120,000,000 pounds in excess of the largest previous production and 18 per cent above the figures of 1914.

The total shipments of iron ore in 1915 are estimated to have exceeded 55,000,000 gross tons, an increase over 1914 of more than 38 per cent. Based on the same price as received in 1914, this represents an increase in value of about \$27,645,000. The increase in pig iron is estimated at 6,500,-000 tons, with a total increase in value of more than \$120,000,000.

The output of zinc (spelter) made from domestic ores was larger than ever before, being about 425,000 tons, worth \$120,000,000, as compared with 343,418 tons in 1914, an increase of about 82,000 tons or nearly 25 per cent in quantity, and of \$85,000,000 in value.

The output of refined pig lead from domestic ores was about 515,000 tons, worth about \$48,500,000, as compared with 512,794 tons in 1914, an increase of only 2,500 tons in quantity but of \$8,500,000 or 20 per cent in value. The production of antimonial lead was 20,550 tons, as compared with 16,668 tons in 1914. The increase in value was nearly \$2,000,000.

The increase in gold production, so far as the incomplete reports indicate, amount-

ed to about \$7,000,000, coming principally from Colorado, California, Alaska, Montana and Idaho. The silver production amounted to about 4,000,000 ounces, chiefly from Montana, Utah and Arizona. The total production will nearly equal that of 1909, when the gold output reached \$100,000,000.

The production of bituminous coal and anthracite in 1915 is estimated to have increased between four and five million short tons, or less than 1 per cent.

The petroleum production in 1915 shows a slight increase over the output of 1914. It is believed that the total petroleum yield of the United States amounted to 291,400,000 barrels. Of this quantity, it is estimated 276,400,000 barrels were marketed and 24,000,000 barrels were stored.

The Portland cement industry in 1915 had an estimated output of 86,524,500 barrels, indicating an increase of one-tenth of 1 per cent over the previous year.

Zinc ore has more than doubled in value during the year 1915—and on December 31 was selling at \$115 per ton. In December, 1914, the selling price was \$52 per ton. It is estimated that the value of the ores handled at Joplin, Mo., during the calendar year 1915 was \$26,038,650.

The coal mined in Missouri in 1914 amounted to 4,935,980 short tons, valued at the mines at \$6,802,325. The output for 1914 shows a decrease of 382,145 tons in quantity, and of \$685,983 in value. The number of men employed at the mines was 9,549.

In Arkansas there are, according to the report of the state mine inspector, 141 coal mines operated by companies capitalized at \$2,594,380. The amount of coal produced in 1915 was 1,700,099 tons, valued at \$3,187,211. The production in 1914 amounted to 2,136,783 tons, valued at the mines at \$3,531,100.97. The number of men employed at the mines in 1915 was 4,228.

Miscellaneous Mention

The Crops of the Nation, 1915. The nation's harvests in 1915 have surpassed any ever before recorded. The value of the principal farm crops, based on the prices paid to farmers December 1, 1915, as announced by the Department of Agriculture December 15th in its final estimate, is \$5,568,773,000.

The acreage of the principal crops in 1915 aggregated approximately 486,570 square miles, larger than the combined area of Germany, France, Belgium, Holland, Denmark and Switzerland.

Corn was planted on 108,321,000 acres, the second largest area ever planted, and the harvest was 3,054,535,000 bushels, the second largest crop ever grown. Its value was \$1,755,859,000, exceeding that of the previous most valuable corn crop by \$33,000,000.

The wheat acreage aggregated 59,898,000 acres, or 6,000,000 more than ever before. The yield was 16.9 bushels per acre, the largest acre yield for winter and spring wheat combined ever attained in this country. The final estimate of production was 1,011,505,000 bushels, with a value of \$930,302,000. The crop exceeded last year's, which was a record, by more than 120,000,000 bushels and by \$50,000,000 in value.

Oats exceeded the record production of 1912 by 122,000,000 bushels and the record value of 1914 by \$56,000,000. Barley production was 13,000,000 bushels more than the 1912 record crop, and was worth \$4,000,000 more than the former most valuable crop, grown in 1914. Rice passed the 1913 record by 3,200,000 bushels, and its 1912 record value by \$1,700,000. Sweet potatoes exceeded by 14,000,000 bushels the 1910 record and were worth \$3,100,000 more than the 1913 value record.

The yield and value of each crop produced in 1915 was as follows: Corn, 3,054,535,000 bushels, value \$1,755,859,000; wheat, 1,011,505,000 bushels, value \$930,302,000; oats, 1,540,362,000 bushels, value \$555,569,000; barley, 237,009,000 bushels, value \$122,499,000; rye, 49,190,000 bushels, value \$41,295,000; buckwheat, 15,769,000 bushels, value \$12,408,000; flax seed, 13,845,000 bushels,

value \$24,080,000; rice, 28,947,000 bushels, value \$26,212,000; potatoes, 359,103,000 bushels, value \$221,104,000; sweet potatoes, 74,295,000 bushels, value \$46,081,000; hay, 85,225,000 tons, value \$912,320,000; tobacco, 1,060,587,000 pounds, value \$96,041,000; cotton, 11,161,000 bales, value \$602,393,000; sugar beets, 6,252,000 tons, value \$35,800,000. In addition to these crops other farm products, such as minor crops, animals and animal products, will bring the year's total to about \$10,000,000,000. Among the minor crops were 76,670,000 bushels of apples, valued at \$156,407,000; 9,325,000 bushels of beans, valued at \$27,558,000, and 457,000 bushels of cranberries, valued at \$2,845,000.

Products of Missouri, 1915. The acreage, production and values of Missouri's crops for 1915, according to the annual report of the Missouri State Board of Agriculture, was as follows: Corn, acreage 7,218,566, yield 220,235,191 bushels, value \$123,640,144; wheat (marketable), acreage 2,278,949, yield 26,475,337 bushels, value \$25,669,634; oats, acreage 933,422, yield 24,148,035 bushels, value \$9.096.452; cultivated hay, acreage 2,844,302, yield 2,223,461 tons, value \$37,-979,893; prairie hay, acreage 138,330, yield 162,924 tons, value \$1,137,615; flax, acreage 7,464, yield 66,430 bushels, value \$112,930; rye, acreage 14,347, yield 192,250 bushels, value \$171,102; buckwheat, acreage 813, yield 13,171 bushels, value \$13,302; barley, acreage 701, yield 11,917 bushels, value \$10,129; broom corn, 1,455 acres, yield 1,-066,515 pounds, value \$53,858; cotton, acreage 70,932, yield 23,478,492 pounds; value \$2,512,199; potatoes, acreage 58,000, yield 5,104,000 bushels, value \$2,960,320; tobacco, acreage 3,958, yield 3,087,240 pounds, value \$385,905; sorghum syrup, acreage 13,346, yield 1,067,680 gallons, value \$651,285; clover, timothy and sorghum seed, acreage 22,722, value \$419,077; forage—cowpeas, kafir corn, soybeans, sunflower seed, unmarketable wheat, miscellaneous vegetables, etc., \$14,500,000.

Exclusive of the fruit crop, poultry products and dairy products the value of the Missouri crop for 1915 is given at \$219,000,000. The original acreage of the 1915 crop was 7,458,763 acres, but almost a quarter million acres under cultivation were

damaged by overflows and had to be abandoned on account of continued rains.

Crop Summary of Louisiana, 1915, U. S. Department of Agriculture report of December 18, 1915:

Corn, acreage 2,200,000, production 45,-100,000 bushels, price 64 cents per bushel Dec. 1; oats, acreage 120,000, production 3,000,000 bushels, price 55 cents; rice, acreage 401,000, production 13,700,000 bushels, price 90 cents; potatoes, acreage 28,000, production 1,430,000 bushels, price 95 cents; sweet potatoes, acreage 65,000, production 5,980,000, price 50 cents; hay, acreage 250,-000, production 438,000 tons, price per ton \$10.30; tobacco, production 126,000 pounds; cotton, acreage 1,090,000, production 360,-000 bales, price per pound 11.2 cents.

The Crops of Kansas, 1915. The secretary of the State Board of Agriculture, under date December 29th, reports on the crops of Kansas for 1915 as follows: The year's production of wheat was 95,768,176 bushels, valued at \$85,681,787. The average production per acre was 12.5 bushels. The corn acreage was 4,537,238 acres and the yield 142,653,140 bushels. The production per acre was 31.4 bushels, and the total value of the crop \$73,547,443. The value of the sorghum crop was \$27,551,275. alfalfa crop amounted to 4,647,078 tons and was worth \$28,433,930. The potato yield was valued at \$2,433,293, and the barley crop for 1915 was worth \$4,399,469. The millet crop of Kansas was worth \$1,035,740. The total value of the state's live stock for 1915 is given at \$310,655,642, a gain of \$50,000 over 1914. Barton county was the leading wheat producer in the state, the vield being 3,086,636 bushels.

The Arkansas Commissioner of Agriculture, Mr. Jno. H. Page, estimates the value of lint cotton produced in the State in 1915 at \$40,000,000 and the value of the seed at \$10,000,000. The corn crop is estimated at 61,400,000 bushels and valued at \$45,000,-The rice crop estimate is 4,205,000, valued at \$4,250,000. The oats crop was estimated at 8,450,000 bushels, valued at \$4,300,000. The value of the wheat crop is given at \$2,115,000; the Irish potato crop, \$1,500,000; the sweet potato crop, \$2,000,-000; the apple crop, \$3,300,000; the peach crop, \$5,000,000; eggs and poultry, \$15,000,-000; hay crop, \$5,000,000; small fruits and truck, \$2,000,000; honey and dairy products, \$2,000,000. The figures show a total for diversified agriculture of \$91,000,000, as

against \$50,000,000 for cotton and cotton seed. A statement concerning the live stock production has not yet appeared.

The Rice Crop of 1915. The final estimate of the rice crop of 1915 by the Southern Rice Growers' Association was published about November 30th. The report shows the total production of rice in the United States to be 6,571,460 bags for 1915. Of this estimate of production of 6,571,460 bags nearly four million bags had already been sold, leaving in first hands only 2,575,667 bags, of which 400,000 were in California. Of the 1915 crop Arkansas produced 1,098,340 bags; Texas, 1,862,046; Louisiana, 3,118,074; California, 444,000, and the Atlantic Coast 49,000 bags, the weight being 180 pounds per bag.

Arkansas cultivated 65,388 acres in Honduras rice, 6,490 in Japan, and 18,122 acres in Blue Rose, with an average yield of 12.2 bags per acre. Texas had 87,000 acres in Honduras, 38,000 in Japan, 130,000 acres in Blue Rose, with an average yield of 7.3 bags per acre. Louisiana had 126,000 acres in Honduras, 62,000 in Japan, and 211,000 acres in Blue Rose, with an average yield of 7.8 bags per acre. California had 30,000 acres in Japan, with a yield of 14.6 bags per acre, and the Atlantic Coast had 7,000 acres of Honduras, yielding 7 bags per acre. The total rice acreage in each state was 90,000 acres in Arkansas, 255,000 acres in Texas, 399,000 acres in Louisiana, 30,000 acres in California and 7,000 on the Atlantic Coast.

Foreign Immigration. Immigration to the United States reached its lowest ebb in more than twenty years during the past fiscal year. Secretary Wilson, of the Department of Labor, in his annual report, states that the total number of immigrant aliens fell from 1,218,480 in the previous year to 326,-700 in the period ending June 30, 1915. All admitted arrivals of aliens, immigrant and non-immigrant, were only 434,244, as compared with 1,403,801 the year before. partures of aliens, emigrant and non-emigrant, likewise show a remarkable decrease. For the fiscal year of 1914 departures were 633,805; for 1915 they were 384,174. excess of arrivals over departures, aliens alone being considered, was only 50,070 in 1915. In 1914 the excess was 769,276. The departed aliens numbered 26,675.

The Nation's Cotton Crop, 1915. The cotton crop amounts to 5,338,588,000 pounds, and is equivalent to 11,161,000 five hundred pound bales. The value of the lint is ap-

proximately \$603,260,000, according to the final estimate of the United States Department of Agriculture. The estimated production is as follows: Virginia, 16,000 bales; North Carolina, 708,000 bales; South Carolina, 1,160,000; Georgia, 1,900,000; Florida, 50,000; Alabama, 1,050,000; Mississippi, 940,000; Louisiana, 360,000; Texas, 3,175,000; Arkansas, 785,000; Tennessee, 295,000; Missouri, 52,000; Oklahoma, 630,000; California, 34,000; all other States, 6,000 bales; total 11,161,000 bales. Price December 1, 11.3 cents per pound.

The Ozark Fruit Crop of 1915. Secretary J. W. Stroud, of the Ozark Fruit Growers' Association, in his annual report, makes the following statements: "The bulk of the peaches shipped from Arkansas and South Missouri this year were sold through the association. Although peach prices were lower than ever before, the crop brought the growers \$387,787. A total of 1,413 carloads of peaches were handled by the association. The strawberry crop was the second most important crop handled. Four hundred and three carloads were sold for \$361.922.70. The crop was smaller than usual. The association handled nineteen carloads of blackberries, bringing \$8,555. Large quantities were used in the canneries and express shipments by individuals were also large. The grape shipments by the association amounted to twelve carloads and were sold for \$3 .-The shipments of cantaloupes amounted to eleven carloads, which netted the growers \$3,702.79. The bulk of this crop was shipped in carloads, but in Northwest Arkansas large shipments were made by express by the growers themselves.

"The total sales of the Ozark Fruit Growers' Association this year, including fruits, vegetables and melons, amounted to \$679,788.83. The cost for handling the products was \$22,719.90. The chief expense was for telegrams and representatives in the larger cities."

The total Arkansas peach crop amounted approximately to 5,940,000 bushels and was valued at \$3,742,000. The Georgia crop amounted to 5,330,000 bushels, valued at \$1 per bushel and the Texas crop amounted to 4,235,000 bushels valued at \$3,684,000. The peach crop of Oklahoma was estimated at 2,500 carloads and that of Missouri at 1,500 to 2,000 carloads. Much of the crop was inferior in quality. The largest shipments in Arkansas came from Benton, Washington, Crawford, Polk and Sevier counties. Crawford and Sebastian counties had over 1,200 carloads, the Highland orchard in Pike

county about 600, Sevier county about 150 carloads and Benton county about 1,000 carloads.

Missouri's Poultry Products for 1915. According to the report of the Missouri Bureau of Statistics the poultry products of the state in 1915 were worth \$53,381,594. Live noultry, which includes turkeys, geese, ducks, squabs, hens, roosters, broilers, stewers and guineas, averaged in value at 10 cents per pound, dressed poultry 121/2 cents per pound: eggs, 15 cents per dozen; feathers, 40 cents per pound. For years the Bureau of Statistics has figured on the basis that two-fifths of all live poultry and of the production of eggs are shipped to market: that one-fifth is hauled by producing farmers and poultry raisers to their neighboring cities and towns and sold there direct to retailers and consumers, and the remaining two-fifths are either consumed by the farmers and their families and employes or are used for propogating purposes. The figures are given below:

Live Poultry — Shipped, 101,721,766 pounds, worth approximately \$10,172,766; quantity sold direct to retailers and consumers 50,860,883 pounds, worth, approximately, \$5,086,383; total quantity marketed alive 152,582,649 pounds, worth approximately \$15,259,149.

Dressed Poultry—Shipped \$5,907,775 pounds, worth approximately, \$5,738,469; quantity sold by farmers direct to consumers and retailers, 22,953,877 pounds, worth, approximately, \$2,869,234; total quantity of dressed poultry marketed, 68,861,131 pounds, worth approximately, \$8,607,702.

Eggs—Shipped, 129,007,040 dozens, worth approximately, \$19,952,056; quantity sold by farmers to retailers and consumers, 64,503,520 dozens, worth approximately, \$9,675,528; total quantity of eggs marketed, 193,510,560 dozens, worth approximately, \$29,026,584.

Feathers — Shipped 1,220,398 pounds, worth approximately, \$488,159.

The Apple Crop of the United States for 1915 is estimated at 76,670,000 barrels of three bushels each. The quality is reported as superior to that of other years. The Arkansas apple crop was about one-half as large as in normal years. Profiting by past experience, about 25 per cent of the crop, 1,481 carloads, have been placed in cold storage. About 4,000 carloads, more or less, have been marketed and about 1,500 carloads are available when the market conditions warrant their sale.

Cannery Notes. Figs grown in the Beaumont country, and preserved with sugar manufactured in Southeast Texas, were turned out at the rate of 6,200 gallons per day at the two canneries in Beaumont during the fig season of 1915. These plants were operated by the Brown Fig Company of Beaumont. The Experimental Farm of the Long-Bell Lumber Co, operated a plant at Bon Ami. La., and turned out several carloads of this fine fruit. The Fair Bros. Canning Company of Mansfield, La., also had a large output of canned figs. canned fig is a popular fruit and there is a ready demand for it at all times. Fig cultivation, if convenient to a cannery, permits a net profit of \$100 to \$250 per acre and almost any kind of soil in Louisiana and Southeastern Texas will produce figs.

The canneries at Neosho, Mo., Gravette, Ark., Gentry, Ark., Decatur, Ark., Shreveport and Lake Charles, La., had a fairly prosperous year, though the excessive rainfall interfered more or less in harvesting the cannery stock of tomatoes, beans, peas, sweet potatoes and fruits.

The Manufacture of Turpentine and Rosin. formerly confined to the Gulf States east of the Mississippi River, has extended into Louisiana and Texas in the last decade. There are now in Louisiana the Grimshaw Naval Stores Company of DeQuincy, La., the Lutcher & Moore Turpentine Co. at Fields, La., the Nona Mills Lbr. Co. Turpentine Plant at Leesville, La., the Orange Paper Mill Co., pine pulp and by-products, Orange, Tex., the Spivey-Gay Co.'s Turpentine Stills at Rose Pine, La., and the Grimshaw Naval Stores Co. at Sompayrac, La. Spivey & Company have a new plant at Voth,, Tex.; L. J. Boykin, one in Jasper county, Texas and Benton McMillen, one in Angelina county, Texas. The Lutcher & Moore Lbr. Co. of Orange, Tex., is now establishing a large plant fifteen miles northwest of DeRidder, La.

The Louisiana Orange Crop is now moving. The crop is somewhat smaller than usual, but the fruit is of good quality and finds a quick sale whenever it reaches the cities. The Satsuma and Louisiana Sweet are the preferred varieties and are grown more extensively every year in Louisiana

and southeast Texas. Orange groves are found in many places. The local demand is such that very few oranges are shipped out of either State.

The Cultivation of Peanuts is now assuming greater proportions each year. Sevier county, Arkansas, produced in 1915, twenty carloads, approximately 25,000 bushels. yielding an income of about \$800 per carload, or \$16,000. Little River and Miller counties, Arkansas, and Bowie county, Texas, and several parishes in West Louisiana also had a large production. Peanut butter. peanut oil, peanut confections and other peanut products are manufactured by the Williams-Hubbard Peanut Co. of Texarkana. Ark., the Bain Peanut Co. of Shreveport, La. the Barnhart Mercantile Co. of St. Louis, the St. Louis Edible Peanut Co. of St. Louis, the Jonesboro Peanut Co. of Arkansas, and other plants providing a good market for this product. Thirty pounds of Spanish nuts and twenty-two pounds of Virginia nuts make a bushel, the price varying from 60 to 90 cents a bushel. Peanut hay is worth from \$10 to \$12 per ton and sometimes more. The yield of oil per ton of nuts is from 50 to 60 gallons and is said to compare favorably with the yield from cotton seed.

Sorghum Syrup Manufacture. The Best-Clymer Sorghum Syrup Manufacturing Co., of Fort Smith, Ark., has just finished its campaign for 1915. The campaign usually lasts about ninety days, working up about 400 tons of cane per day, if operated at full capacity. It requires the product of 5,000 acres of sorghum cane to utilize all the possibilities of the plant. The product of the season's work has been 15,000 gallons of syrup, making about nine carloads, which is about one-third of the mills capacity. It is hoped that the product of 5,000 acres will be available in 1916.

The Fish and Oyster Industry of Port Arthur, Tex. The White Fleet Fish Company has closed the red snapper reason and during the winter months is devoting some of its energy to the development of an oyster trade. About one hundred barrels are brought to Port Arthur about twice a week at present and it is hoped that a permanent oyster business will be established. The menhaden catch of the past season yielded approximately \$40,000 worth of fish oil and scrap and, compared with the fisheries along the Atlantic coast was considered profitable.



CHRISTMAS IN KANSAS CITY SOUTHERN RY. TELEPHONE EXCHANGE

CHRISTMAS IN THE K. C. S. TELE-PHONE EXCHANGE.

The telephone operators in the Kansas City Southern General Office Building are so highly esteemed by the other occupants of the building and by those who do business with them, that no Christmas holiday could pass by without making the operators the recipients of the good wishes of all, and the remembrances from many friends within and without the building. This year (1915), the demonstrations of personal good will and esteem surpassed anything in the past years, and attested the popularity of the two young ladies who officiate at the switchboard. They are Miss Carrie Jones and Miss Jeannette Krenzer. Their unfailing courtesy and prompt and efficient service make friends of all of those who use the telephone.

This Christmas the first reminder of the holiday was a very pretty little Christmas tree, properly decorated as a Christmas tree should be. In the picture it was so far from the camera that in perspective it appears much smaller than it really was in fact. With this beginning the young ladies set to work to transform their little room into a veritable abiding place for Santa Claus. There was the tree trimmed with the usual accessories, including the candles, and the switch board was decorated with festoons of holly and sprigs

of mistletoe. A Christmas bell was suspended from the ceiling, and little artistic touches here and there effected such a transformation that one would not imagine this room to be the center of the most ceaseless activity in the great general office building, and, while this activity never flagged an instant and the deft fingers never paused in their skillful manipulation of the cords, the Christmas spirit reigned in that little room for a week.

For three days preceding Christmas the visible expressions of good will came in such numbers that there was only one place to put them—on the floor. There were bon-bons, gloves, books, fruit and other things appreciated by young women, every gift being an expression of the genuine friendship and kindly regard of the donor.

The telephone company is ever appreciative of satisfactory conditions at their private exchanges and are pleased to know that the girls they have sent out are doing well and reflecting credit upon the parent company. The Kansas City management of the Bell Telephone Company has always taken particular interest and felt more than usual pride in the Kansas City Southern exchange, and have equipped it with one of the finest boards in the country. It is to them that we are indebted for a copy of the flashlight picture which is being used by them in their national publication.

The Question of Railway Mail Pay

The Merchants' Association of New York, through its board of directors, appointed a committee to study postal affairs and their relation to railway transportation This committee reported to the board of directors October 15, 1915, as follows:

"It is vitally important to the producing, manufacturing and distributing classes in particular, and to the entire people of the nation in general, that their transportation facilities be constantly maintained upon a high plane of efficiency. A contrary condition would inflict great harm and serious loss upon the entire community.

"Continued efficiency of existing railroads is impossible unless their revenues are sufficient to meet the costs of operation, provide for maintenance and betterment, and supply a fair profit upon the capital employed. Unless these conditions are met, additional railroads for future needs cannot be constructed, as otherwise capital cannot be secured for such construction.

"During recent years the net earnings of the country's railroads have been constantly declining, until they no longer suffice to provide for the proper demands upon them.

"If efficiency is to be maintained, the decline in railroad net earnings must not only be arrested, but those earnings must be restored to a higher level. This can be done only by increasing the rates charged whenever they are shown to be unduly low.

"Having in view the condition outlined above, your committee has made a protracted and very thorough study of measures now pending before Congress intended completely to change the basis of railway mail pay; in order to learn:

"(a) Whether the railroads are now underpaid or overpaid for mail carriage;

"(b) Whether or not the proposed new plan will give to the railroads adequate compensation for the service rendered by them;

"(c) What effect, if any, the proposed new plan will have upon freight rates and freight revenues.

"In making this study, we have had the assistance of Mr. F. B. DeBerard, the Association's Director of Research, who was continuously engaged, during many weeks, in examination and analysis of the immense

body of material relating to the subject. His report is appended hereto and frequently cited."

This report, covering the whole field of railway mail transportation, was considered by the board of directors of the Merchants' Association, at a meeting held October 21, 1915, and approved by a unanimous vote. The board of directors adopted the following preambles and resolutions in relation thereto:

"Whereas, It is of vital importance to every business interest and to the entire people that their means of transportation constantly be maintained at the highest practical point of efficiency, which condition is impossible unless the railroads be assured of the revenues necessary for their proper support; and

"Whereas, It is shown by the analysis of the Interstate Commerce Commission—

"(a) That railroad revenues as a whole are insufficient and should be increased, and

"(b) That the deficiency is mainly due to insufficient passenger service earnings; and

"Whereas, It is shown by the analysis of the Bourne Joint Congressional Committee that the earnings of the mail traffic branch of the passenger service are approximately 22½ per cent below the average earnings of the passenger service, which the Interstate Commerce Commission finds deficient as a whole: and

"Whereas, It is shown by the report of the Association's Committee on Postal Afairs that the average rate of compensation paid by the Government to the railroads for mail carriage has been reduced approximately 50 per cent since 1902, and now produces little or no profit and possibly entails a loss; and

"Whereas, The railroads receive no payment

"For increase in weight of mails during the four year period following each quadrennial weighing;

"For apartment car space in 4,000 cars used mainly for assorting mails in transit; and

"For so-called 'side' and transfer service; the value of which uncompensated service is now approximately \$11,000,000 to \$12,-000,000 per year; and "Whereas, It is proposed to abolish the present method of payment by weight and to substitute therefor payment by space exclusively, on a basis which will exact from the railroads great increase of service without corresponding increase in compensation; and

"Whereas, The space-rate proposed is equivalent in the case of fully loaded cars to a rate of 1½ cents per ton mile for freight carried for the Government on passenger trains, while the same high-class freight, if carried for private shippers on freight trains, throughout the country would pay from two to three times that rate per ton mile; and

"Whereas, The space plan proposed totally disregards the principle upon which the entire freight rate structure is based, namely, 'rates proportioned to value of service;' arbitrarily limits the revenues which may be derived from mail carriage; makes the carriage of freight much cheaper on passenger trains than on freight trains; and dangerously attacks the existing freight revenues of the railroads; now, therefore, be it

"Resolved, By the Merchants' Association of New York; that the public welfare requires that the country's transportation facilities be maintained in constantly efficient condition, to effect which end the railroads must receive adequate payment for their service; and therefore that rates shown to be unduly low should be advanced to a fair basis; and

"Resolved, That in our opinion the compensation now paid the railroads for mail carriage is insufficient, and should be increased by payment for services at present uncompensated for; and that we therefore recommend

"(a) Payment, for the present, for weight, on the basis of the existing law, but with provision for annual instead of quadrennial weighing;

"(b) Payment for apartment car space, pro-rata, upon the basis of payment now in effect for full postal cars:

"(c) Payment to the railroads for side and transfer services, or, as an alternative, that the railroads be relieved of the performance of those services; and

"Resolved, That no new and untried plan for determining railway mail pay should be adopted, unless or until approved by the Interstate Commerce Commission, after thorough investigation, with especial reference to the effect of such plan upon the railroads' existing freight revenues, and the equity of rates proposed for the carriage of

postal matter upon passenger trains in comparison with the rates charged for first class merchandise on freight trains; and we recommend that for not less than two years, all weighing and adjustments for determining railway pay be supervised by the Interstate Commerce Commission, which Commission shall obtain from the Post Office Department and the railroads reports covering all necessary information as to the service performed, and thereafter report to Congress, with recommendations as to further changes, if any, that should be made in the law; and we further recommend that pending such report and recommendations by the Interstate Commerce Commission the existing law be continued, but with the modifications indicated by the preceding resolution: and

"Resolved, That the plan of space payment for mail carriage, proposed by the Bourne and the Moon bills, is excessively discriminatory in favor of the United States Government, in that it makes, for mail freight carried on passenger trains, a rate only about one-third to one-half the rate paid for high-grade freight carried on freight trains, which condition will promote the diversion to the mails of large quantities of high-grade merchandise, on all of which the railroads will suffer a loss of one-half to two-thirds of their present freight revenues; and, therefore, that the Merchants' Association of New York oppose any and all bills for the re-adjustment of railway mail pay on the basis mainly of space, or substantially as proposed by the Bourne and the Moon bills.

Z. C. MEAD, Secretary.

The measure commonly known as the "Moon Bill," devised to change the method of paying for mail transportation on railroads, was made a rider on the Post Office appropriation bill in the last Congress but failed to pass. The Postmaster General has announced that it will be re-introduced during the Congress now in session.

The principle upon which freight rates rest, namely, the classification of commodities and gradation of charges with reference to the nature and variance in value of the commodity transported, under which valuable commodities pay a higher rate than is paid by commodities of small value, is entirely set aside in the provisions of the Moon bill. Under a uniform rate system, low grade freight would pay per ton as much as would silks. The transportation of grain would cost much more than at present, and

our surplus grain could not reach foreign markets because of the excessive cost of transportation. A wide range of commodities would not move at all, and the traffic of the railroads would be enormously reduced. The whole structure of railroad freight rates, therefore, rests upon gradation, the rates being apportioned with reference among other factors to the value of the service, that value varying with the character of the commodity. The weight of the commodity is also an element in the calculation. The principle is almost universally accepted as beneficent and indispensable.

The provisions of the Moon bill are violently in antagonism with the principle upon which freight rates rest, the classification of freight. The bill provides for the payment of mail carriage by the space occupied without regard to weight. The railroads would be compelled under this plan to accept flat mileage rates for mail cars and apartments, regardless of the load carried. The highest rates permitted by the billwhich the Postmaster General could further reduce at his discretion-would be inadequate even for the transportation of very light loads. Yet the Postoffice Department would claim the right to load the car space to its full capacity, thereby making it possible to obtain the transportation of a very large addition of mail tonnage without payment for the additional service rendered.

If the Postoffice Department enters into actual competition for the transportation of merchandise and it has been proposed to raise the parcel post weight limit to 100 pounds-the Postoffice Department under the provisions of this bill, paying for space and not for weight, could carry a first-class commodity on a passenger train, for onethird of the present first-class rate carried on a freight train, though the freight rate is approved by the Interstate Commerce Commission. The Postoffice Department competing with a railroad on its own cars would be cutting freight rates, thereby reducing the already insufficient revenues of the railroads and nullifying the acts of the Interstate Commerce Commission.

The Moon bill is substantially a delegation to the Postmaster General of legislative control over railway mail pay, and would vest the Postmaster General with arbitrary personal powers beyond the proper scope of his office. The bill would place no restraint of any kind, save personal discretion, upon the extent to which the Postmaster General might reduce the compensation of the railroads, in the exercise of the rate-making power which would be delegated to him. Nowhere does the Moon bill specify that the

rates allowed the railroads by the Postmaster General shall be compensatory, or fair, or just, or even reasonable.

New York, November 28, 1915.

Mr. Ralph Peters, Chairman of the Committee on Railway Mail Pay, made the following statement today in reference to the Post Office Department's recent announcement that the railroads of the Middle West would receive increased pay for carrying the mails during the next four years;

"Unfortunately, some people have misunderstood the Department's announcement. There has been no increase in the rates of pay or any concession to the railroads. Actually there has been a decrease in the rate for hauling each ton a mile.

"In reality, what has happened is a good practical illustration of one of the railroads' chief claims of underpayment for carrying the mails. The Department has weighed the mails on the railroads in the Middle West, for the time since 1911, and finds that in the interval the average tonnage carried has increased about 35 per cent. But the annual pay of these railroads, which carry the great transcontinental mails in addition to the mails of their own territory, is to be increased only 25 per cent, or from \$16,000,000 per year to \$20,000,000 per year.

"This readjustment of pay applies only to the future and includes no settlement of arrearage for having carried this increased mail tonnage during the four years just passed. If the growth of the traffic has been steady, \$1,000,000 per year out of the \$4,000,000 additional now found to be due annually, should have been added in 1912. \$2,000,000 per year in 1913 and \$3,000,000 per year in 1914. Here, then, is a sum of \$6,000,000 earned by these railroads, but withheld from them because the Post Office Department weighs the mails only once in four years.

"Does it not seem that Congress, in fairness, should order the mails weighed and the pay of the railroads readjusted, at least once every year? Since the mails were last weighed in the Middle West, the parcel post has been established and has grown to its present volume.

"The Post Office Department appears to think there is competition among the railroads for the mail service because, in a very few instances, a road having the longer haul between two given points accepts the rate of the road having the shorter haul and carries some of the tonnage. This indicates the absence of competition rather than the presence of it. Real competition

would be the offering of rates per mile lower than those named by law and of this there are no instances. The total amount of pay sacrificed by the railroads of the Middle West. according to the Department's figures, is only one per cent of the mail

pay in that region.

"I think it would be a good thing for the Government, and for the whole people, if the coming Congress would enact legislation to do justice to the railroads in the matter of railway mail pay. If the rates were once made fairly remunerative, the Post Office Department might then stimulate competition between the various roads as to the speed of trains and frequency of service, with great advantage to the business community."

LITIGATION REGARDING MAIL PAY.

The question of the legality of the series of arbitrary measures which the Postoffice Department has adopted in recent years to compel the railways to handle increased quantities of mail without an increased, and even for a decreased, compensation, is to be finally settled, in the only way such a question can be settled-by a lawsuit. The New Haven, the Boston & Maine and some other New England roads have joined in a proceeding against the government in the Court of Claims for the recovery of an aggregate of \$10,880,865. They allege this amount is due them mainly on the ground that un-der the system of quadrennial weighing they are not paid at all for handling the annual increment in the mails, and that they have been forced to handle the parcel post traffic without adequate compensation. It is gratifying that a group of railways finally has decided to appeal to the courts to ascertain what are the respective rights of the carriers and the Postoffice Department. For almost ten years successive postmaster generals and Congress itself have dealt

with the compensation of the railways for carrying the mails with an insolent and tyrannical arbitrariness which would have done credit to the bureaucracy of Russia. It is high time that it should be ascertained whether the constitution and laws of the United States afford no protection to railway property against the attacks of government officials bent, for political purposes, on making a showing in the Postoffice Department at the expense of other people. Meantime, the question arises as to why railways should have to sue the government to determine their rights regarding compensation for carrying the mail. when the rates they may receive for carrying freight and passengers are determined by the Interstate Commerce Commission? Why should not the government submit the question of what rates it shall pay for transportation to the same body to which it requires the traveler and shipper to submit the question of what rates they shall pay?-Railway Age Gazette, Dec. 3, 1915.

RAILROAD BUILDING LIGHT.

New Mileage in 1915 the Smallest in Fifty Years.

Less Than 1,000 Miles Constructed—Receivers Are Operating a Sixth of the Total Mileage of the Country—New Cars.

Chicago, Dec. 30.—Fewer miles of railroad were built in the United States in 1915 than in any other year since 1864, and more miles of railroads were in receivers' hands than ever before, according to railway statistics compiled from official sources by the Railway Age Gazette and made public tonight. There have been only three other years since 1848 in which the increase in railway mileage was less than

	Some Figures That Spe	ak for Thems	elves.	
Receipts	and Expenditures of t (From the Departmen	he Post Office	Department.	
Receipts Total Revenues		1900	1915 \$287,248,165	Increase 181 per cent
Expenditures Rural Delivery Service		1900	1915	
Wages Railway Postal	Clerks	8.839.767	\$ 49,805,851 28,408,243	11.744 per cent 221 per cent
Service in Post Office Inland Shipments other	than Rail	. 7,794,212	$139,936,546 \\ 17,337,637$	173 per cent 122 per cent
Shipping, Foreign Railway Mail Pay			3,273,436 59,576,288	52 per cent 60 per cent
Total	way Mail Pay vs. All O	.\$107,740,267	\$298,546,026	177 per cent
All Expenses except	way mail 1 ay vs. All O	1900	1915	Increase
Railway Mail Pay		.\$ 70,424,543	\$238,969,738	239 per cent
Railway Mail Pay		. 37,315,724	59,576,288	60 per cent
Railroad transporta	tion of the mail is the r	nost vital facto	or in the U.S. I	Postal Service. 🐪
A Joint Congression then overpaid.	nal Committee in Januar	ry, 1901, report	ed that the rai	lroads were not
	ist be the condition now	ę		

(Committee on Railway Mail Pay, Jan. 17, 1916.)

one thousand miles, and those were the Civil War years of 1861, 1862 and 1864.

In 1915 the total miles of new railroad constructed in the United States were 933, as compared with 1,332 in 1914 and 3,071 in 1913. There also was a reduction in the second trackage built.

The largest mileage of new road in one state was built in Pennsylvania, which constructed 98 miles. Oregon was second with 83 miles and Washington third with 71 miles. In eleven states no new road was built.

Canadian roads built 718 miles of new first track, as compared with 1,978 in 1914, while in Mexico 36.5 miles were built, as against none recorded for 1914.

According to the statistics quoted, receivers now hold and operate 38,661 miles of railroad, with a total funded debt of 1,607 million dollars, and a total capital stock of 747 million dollars, representing almost one-sixth of the total mileage and capitalization of the railroads of the United States.

Statistics on the number of new cars and locomotives ordered in 1915 show that there was an increase over 1914, but it was smaller than any other year in recent times, except 1908. The new freight cars ordered in 1915 totaled 107,796, as compared with 80,264 in 1914 and 146,732 in 1913. New passengers cars numbered 3,092, as against 2,002 in 1914 and 3,179 in 1913.

Locomotives ordered in these three years numbered 1,573, 1,265 and 3,467 respectively. The bulk of orders this year was placed in the last three months and include 302 cars ordered by the Pullman company for its own use and 18,222 freight cars and 850 locomotives by foreign countries.

The miles of railroads operated under block signals systems increased 9,677 miles in 1915 to a total of 97,809, while the automatic signal mileage increased 1,471 miles to a total of 31,160.

An Austin dispatch shows that not a railroad in Texas was authorized to issue new bonds during the past fiscal year, indicating that railroad building in Texas has stopped. This is not because Texas has all the railroads it needs. Texas statesmen and damage suit lawyers seem at last to have demolished the source of the golden egg supply.—Lake Charles American Press.

WHO PAYS FOR MY RAILROAD TICKET?

(From the Chicago Herald.)

Governor Dunne in his reply to the request of the Illinois railroads for a reconsideration of the 2-cent fare law, remarked on the absence of "vigorous protest" from the railroads against the 2-cent rate "for nearly eight years." This suggests the statement of a fact generally overlooked, though long well known to students of railroad statistics.

This is the fact that the passenger service of the railroads, taken as a whole, has long been done for less than its cost. Why haven't railroad managers 'said something about it before? Well, occasionally they have. They have not, as a rule, made much of a point of it.

Probably they have failed to do so on the theory on which a State street retailer delivers a 5-cent purchase away out at One Hundred and Sixteenth street. There is a loss on that, but it may be made up by gains on other sales. Usually it is.

The fact is that people have been largely traveling on the railroads partly at the cost of shippers of merchandise. The shipper pays for the traveler. If shippers and travelers were the same persons this would be "as broad as it is long." But they are not the same persons, except to a limited extent.

Noting this fact, the Interstate Commerce-Commission has told the railroads that they shouldn't take from their freight income to pay for their passenger service—that each service should pay its own bills.

So the question for each man to ask himself when considering the railroads' request for higher passenger fares is:

"Who pays for my railroad ticket? Am I fairly paying for it myself, or sponging on my neighbor?"

"Let any merchant look over his records for years; let him note the fat years and the lean years; let him then mark the years of railroad extension and railroad improvements—of railroad spending. Let him mark on the other side the years of railroad retrenchment, and he will find that the years when his prosperity has waned have been the years when the railroads were not progressing."

[&]quot;Ample, safe and rapid transportation facilities are even more necessary than cheap transportation."—Theodore Roosevelt.



DEMONSTRATION OF FIRST AID TREATMENT OF MAN WITH BROKEN BACK.

Safety First—First Aid

BY FRED MALETZ.

Among the effective agencies employed in saving life, along with our Safety First movement, comes First Aid to the Injured.

The education of the employee in the art of giving First Aid to his fellow employee, in case of accident, was begun in 1899 among the miners of the East. In September, 1910, the movement was instituted in the United States Bureau of Mines, and is being taught throughout the coal fields of the country. But it has not stopped at mines only. Today it is being taught in numerous other industries.

Under date of August 18th, 1915, I was favored with a letter from J. W. Paul, chief engineer of the Bureau of Mines, wherein he gives a large list of companies who maintain a department of First Aid instruction of their own, also informing me that it was not entirely confined to industries, but that a number of cities had adopted First Aid instructions in the schools and in their fire and police departments.

Having taken the course at the United States Mine Rescue Station at Pittsburg and having the honor of helping pull down several prizes at the First Aid Field Meet held on the campus of the State Normal at Pittsburg on May 29th, 1915, I made arrangement with Mr. Cornelisen, the general chairman of the Safety First Committee, to give a demonstration at the Safety First meeting held in Pittsburg June 3d. Considerable interest was shown by those present and today we have several of the employees at the Pittsburg shops who have taken the courses.

The accompanying picture shows the work of the First Aid Team bandaging a fellow employee for a broken back. In many such cases an injured man's life has been jeopardized by the rough handling given before the arrival of a physician.

With First Aid Teams instructed in this work and furnished with the necessary material to work with, the patient can be given relief while he is waiting for the physician or ambulance, instead of receiving the sympathies of those present, which is mostly what a person receives if injured away from doctors' reach.

Let's hope that when another year rolls around that First Aid will be riding hand in hand with Safety First on the K. C. S.

Employes' Supplement

THE LOCOMOTIVE'S CENTENARY.

It would require great hardihood to arbitrarily assert which of the inventions of the past one hundred years is the greatest or the most useful. But it will require no great stretching of the truth to declare that within the past century the world has received greater, better and more useful inventions than in any earlier period in its history.

This month is the centennial of the invention of the steam locomotive. It was one hundred years ago that George Stephenson built the first crude, wood-burning engine that was destined to revolutionize traffic and transportation overland in every quarter of the globe. Stephenson's immature locomotive would look pigmy and puny beside the great moguls that haul the fast freights of the present railroading era, but it was the genesis of one of the best and most useful of our inventions. Without the steam engine traffic and travel today would be in the stage coach period, unless the discovery of electricity would obviate the tiresome, tedious mode of travel that was prevalent in the days of the forefathers.

In looking about for a suitable designation with which to crown the locomotives it is not far-fetched to class it as one of the very greatest of all inventions, in that it knits together cities thousands of miles apart; it brings companionship between peoples closer and stronger; it permits the commerce of the inland to be greater, bigger and better, and it brings to the agrarian communities the seaboard, so to speak.

In the telegraph and telephone space has been annihilated. In the Roentgen rays surgery is enabled to take great forward strides. In the discovery of electricity, which is a natural element and no invention, great deeds are accomplished and the world's progress enhanced in innumerable ways. In the wireless there is greater safety, and one might go on indefinitely telling of the inventions that have made for the comfort, the edification and the progress of mankind. But with all due credit to those creations, it is doubtful if any of them have the tangible value to all mankind that the steam locomotive has been in the past. It will be honored in the cen-

tenary of its birth, although there is a wide belief that its greatest usefulness was in the past and that electric power is now on the eve of retiring gradually the steam locomotive from the railways of the country. —Philadelphia Press.

RAILWAY TRESPASSING.

The Santa Fe Railway Company has just issued a striking warning to trespassers on railroad property. The warning recites the fact that 10,302 people were killed on the steam railroads of the country last year, and of this number 5,471, or 53 per cent, were trespassers-people who were using the railroad right-of-way as a thoroughfare or playground-men and boys attempting to board trains; women with or without children walking on or across tracks; children walking tracks to and from school, as a short cut to town, picking up coal, etc., not one of whom had any business or right to be where they were when they were killed, the statement says.

Sixteen trespassers are killed every day, the warning adds, and in addition to the 5,471 who lost their lives last year, 6,354 were injured.

During the last twenty-four years 108,009 persons have been killed and 117,257 injured while walking on railroad tracks or jumping on cars in the United States.

More than one-half the entire number of people killed on American railroads are trespassers, says the Santa Fe's warning. This is an awful toll to pay for carelessness, and the road advises the making and enforcing of laws to prevent the slaughter.

"SAFETY FIRST" RULES FOR PASSENGERS.

Don't stand in the doorway. Some fool may rush through the waiting room and hurl you on the tracks. Besides, you are in the way of other passengers.

Don't rush through the doorway. You may collide with someone coming in and hurl him out on the tracks.

Don't stand too near the tracks. There is always a possibility of your being jumped on by some irresponsible leaping from a moving train, or being caught by something projecting from a car.

Don't attempt to cross tracks to eastbound platform until you are sure that there is

nothing coming this way on the westbound tracks. Hesitate a moment and look.

Don't step on any metal if you can avoid it. There is a live rail under the wooden guard on both sides of the center platform, contact with which means death. Use extreme care not to stub your toe under the guard rail.

Don't attempt to board a moving train. There is no business or engagement so important as to risk the chance of going through the rest of your life on crutches.

Don't stand near the door of a baggage car. There may be baggage to unload and a trunk coming down on your toes is not a pleasant sensation.

Don't cross in front of a standing train, unless you are sure that you can get clear in case it should start.

Don't fail to reach the station in sufficient time to catch your train. More men have dropped dead from over-exertion trying to catch trains than have died under the wheels.

MANY SHIPPERS CARELESS.

Fail to Properly Mark Consignments and They Go Astray.

The over and short bureau of the car record office of a railroad receives many over and short reports every day from stations located at different points on the system. Immediately after they arrive at this department they are filed and their statements are looked up as quickly as possible by the clerks employed in the bureau. For a large proportion of the shipments that go astray the clerks with little trouble find an over report and a short report which match each other and many cases are, of course, settled by the station agents without troubling the head office at all.

The system here referred to deals with those cases that cannot be cleared up without some little study; perhaps 200 or 300 daily. Of course, a considerable portion can be settled readily by correspondence. Many others require more particular treatment, and the office employs men who are on the road most of the time searching for lost goods and making other investigations incident to the proper treatment of freight claims of all kinds.

In making reports of overs, property must be described in detail, so as to show, if possible, to what they belong. Packages must be described as old or new. Over reports should bear notations of any articles

reported short from the same car. Freight known to belong at some other station is immediately forwarded, of course, but the report is made just the same. Mistakes in marking, or the sending of freight packages with no marks or illegible marks, are the most numerous causes of freight going astray. It is asserted that if shippers would pay closer attention to the correct marking of their shipments, most of the over and short troubles would be eliminated. Frequently it will be found that two items will match in the name of consignee, but not in destination, the shipper having made a mistake in marking the package. A mistake of this kind is often undetected by freight house men, though there is a plain discrepancy between the shipping receipt and the marking of the goods.

There are so many towns and cities of the same name scattered all over the United States, which have caused mixups in the shipment of freights. For instance, Pittsburg is found in Pennsylvania, Kentucky, Tennessee, Alabama, Texas, Oklahoma, Kansas, Missouri and several other states. Springfields are located in several states in the Union, and there are a number of other towns of the same name. Philadelphia, that good old Quaker town, is found in several states. With all of these opportunities to make mistakes in the marking of goods, it is no wonder that railroads are compelled to maintain an over and short bureau.

THE SHREVEPORT SHOPS.

During the past fiscal year the Kansas City Southern Railway Company spent \$955,541.59 at Shreveport. Its receipts here during the same period totaled \$761,750.68. The disbursements exceeded the receipts by \$193,790.91.

This information is given in a communication from President J. A. Edson to S. B. Hicks, a prominent Shreveport business man, and shows the importance of the K. C. S. road to Shreveport, where it maintains large shops and gives employment to many men, which means the circulation of a great deal of money for local stores and other business houses.

President Edson's letter is quoted by Division Superintendent R. R. Sutherland of Texarkana, in writing to some of the local representatives of the company, including General Agent A. H. VanLoan, as follows:

"Dear Sir:—Following from Mr. Holden:
"'For your information I quote the following letter under date of December 17th, as addressed by the president to Mr. S. B.

Hicks, president of the Hicks Company, Limited:

"'Statement prepared showing the amount paid out at Shreveport for labor, supplies, etc., for the year ending June 30, 1915; also the earnings from our Shreveport business, it occurred to me might be of great interest to you and to some of our other good friends:

Paid out for labor, supplies, etc. \$955,541.59

Amount collected in freight

charges at Shreveport on Shreveport business...... 761,750.68

Amount paid out at Shreveport

in excess of amount collected. 193,790.91 "'I guess you know that our service is good.

"'Yours truly,
"'R. R. SUTHERLAND.'"

BREAKS PAST RECORDS BUILDING U. S. SHIPS.

New York, Dec. 18 .- While plans for the revival of the American merchant marine are being widely discussed, reports collected from the country's shipbuilding plants show that the revival is already under way. These reports reveal that at the present time there are under construction in American shipyards more than one hundred and fifty ocean-going merchant vessels, with a total tonnage exceeding one-fourth of the entire American built ocean tonnage which existed at the beginning of the war in Europe. Every shipyard is jammed with construction work and it is estimated that it will take eighteen months to fill the orders already on hand. It was stated by the heads of two of the largest shipbuilding concerns that all their work was for Americans, and that none of the merchant ships were being built for foreign countries for use after the war. The only marine work being done in America for foreign powers is the construction of motor boat patrols for England and Russia and submarines. At the present time the tonnage of Americanbuilt ocean-going ships is about 1,750,000. There are under construction now more than 500,000 tons in ships, which is more than was ever before in process of being built at any one time in the history of the country, and the ships are better and larger than have ever been ordered in the past.

Good service can be given only by a road that is making money. The people are the chief sufferers wherever a railroad is operated at a loss.

SOME DON'TS FOR THE CLERKS.

By R. L. WHITE.

Don't throw the pins away when you clear up your desk. Chances are they still have the sharp point and can be used again.

Don't throw the letterhead and blind copies in the waste basket because you made an error in date or salutation. Tear the good bottom portion off; it makes admirable paper to "figger" on.

Don't sharpen the next pencil as you would whittle a stick. There is a difference between the two. Watch the man who makes the pretty point on the pencil.

Don't use a large envelope for mailing the next man's mail to him when small or medium size would suffice. A suit of clothes costs more than a pair of trousers.

Don't ever use more than one envelope for one time of mailing to one party. It takes you just as long to address the extra envelope or envelopes as it would to get all mail together. Think of the mail clerk, the train baggageman and the man who opens two or more envelopes when one would have sufficed.

Don't throw the rubber bands on the floor. Bands cost one railroad in this country fifty thousand dollars a year. If you doubt the high cost of rubber bands buy one box.

Don't throw the pencil away because it is half used up. A pencil lengthener can be used and permits usage to the last inch.

Don't throw carbon paper away until it has "served full time." Don't leave carbon paper on top of your typewriter to be blown to the floor by the janitor's broom.

Don't use the printed letterheads or printed forms for scratch paper. Scratch paper is far cheaper; it requires a printer to feed to the printing press.

Don't throw away the top sheet of the writing paper pad. Oftentimes it is not the least bit soiled.

Don't fail to count your needs before printing mimeograph circular letters. It is wasted energy and waste of paper to print more copies than you really need.

Don't throw away your old file records without recovering the file; it can oftentimes be used again.

Don't fail to turn off the electric fan when you leave at night. The motor wears out the same as you do.

Don't fail to turn out the lights, where proper to do so, before going home at night.

—Railway Age Gazette.

LOYALTY, AS VIEWED BY AN EMPLOYEE.

(From Sunset-Central Bulletin.)

Harmonious relations existing among foremen create a harmonious relation among the men; the spirit of good will and brotherly feeling is contagious. . . . Is there any other business on earth that needs something to encourage the men it employs more than a railroad company? No, not one; for the simple reason that railroad companies are criticised, blackguarded, persecuted and unfavorably censored without a just cause more than any other enterprise on earth. They are a target shot at from every conceivable angle and with every kind of ammunition. It is a natural consequence that men who hear this unmerited criticism on every hand should enter the company's service with their minds embittered by such unwholesome suggestions; and in spite of the pay they receive and the treatment they are accorded, it takes many a year to purge this venom and antagonism from their minds.

The railroad companies of these United States lose hundreds of thousands of dollars every year through "soldiering," negligence and carelessness, emanating from a spirit of unloyalty which is an inheritance born of malice and handed down from one generation to another. The only antidote the stockholders can employ to overcome these adverse influences is by reaching their subordinate employees through the avenues of their presidents, managers. superintendents and the foremen they employ; and if there is any missing link of co-operation and harmony, from the president to the firing line, the chain is broken and the good influences which are so essential are lost.

KEEPING THE MONEY AT HOME.

Besides those who sell the stuff there really are a lot of confused people who think that there is wealth for the community in the waste and wrong of whisky, that booze booms business, and all that sort of thing. One meets these victims of saloon logic even in the prosperous dry towns of the West. They ought to ponder the wisdom of a Delaware judge who sentenced an inebriate to drink at home. The Buffalo Express quotes His Honor as follows:

"Give your wife \$2 to buy a gallon of whisky. There are sixty-nine drinks in one

gallon. Buy your drinks from no one but your wife, and by the time the first gallon is gone she will have \$4 to put in the bank and \$2 to start business again. Should you live ten years and continue to buy from her, and then die with snakes in your boots, she will have enough to bury you decently, educate your children, buy a house and lot, marry a decent man, and quit thinking about you."

That's the whole truth about wealth and whisky, and we hope other police court judges will follow this precedent.

PESSIMISM AND OPTIMISM.

(Wilfred H. Sobey in Watchman-Examiner.)

Two frogs fell into a jug of cream—A delectable fate for frogs, 'twould seem; But these frogs, like folks, were of different kinds.

And, like folks, these frogs had differing minds.

Croaked frog number one, with Batrachian pout:

"From this nasty stuff we shall never get out.

The water for me; this mess makes me sick.

For Amphibians this liquid is much too thick."

Then he languidly swam with a doleful air, Till at last he sank in dire despair. Now, the other frog was of different stuff; He, too, liked the water well enough, But he creaked as round the ing he'd.

But he croaked, as round the jug he'd range,
"This is quite an adventure for a change.

I'm out of my depth, but I'll never say die." So he speeded up for another try, With this result: as he paddled about Quite an island of butter was soon churned

Tired out, he rested on this a while, Then out of the jug he jumped with a smile.

MORAL.

The pessimist quits with hardly a try, But the optimist sticks, for he never says "die."

Reader, to which class do you belong?

Without the transportation industry, life itself, except of the simplest sort, would be almost impossible. Everything on earth, even man himself, must be moved before it can have value, and the more highly developed the transportation facilities of a people, the more rapid their development industrially and socially.

KANSAS CITY SOUTHERN RAILWAY CO. TEXARKANA & FORT SMITH RAILWAY CO. ARKANSAS WESTERN RAILWAY CO.

EDSON

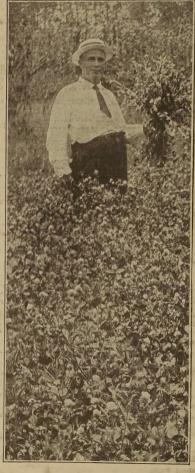
J. A. EDSON President J. F. HOLDEN Vice-President R. J. McCARTY Vice-President S. G. WARNER General Passenger and Ticket Agent W. W. AVERY Assistant General Passenger Agent R. R. MITCHELL General Freight Agent H. A. WEAVER Assistant General Freight Agent J. R. MILLS Assistant General Freight Agent
BEAUMONT, TEX. E. G. SPENCER
E. G. SPENCER
J. O. HAMILTON
DALLAS, TEX., Cotton Exchange Bldg. E. L. WHITNEY
FORT SMITH, ARK. H. N. HALL General Agent J. C. CARSON City Pass. and Ticket Agent
HOUSTON, TEX., 909 Franklin Ave. G. M. RILEY
JOPLIN, MO.
C. W. NUNN
KANSAS CITY, Mo., 911 Walnut Street. L. V. BEATTY
L. V. BEATTY General Agent J. A. McMANUS City Pass, and Ticket Agent L. S. BANKS General Ticket Agent, Union Station C. A. MILTON Passenger Agent, Union Station
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LOS ANGELES, CAL., 610 Trust and Savings Bidg. M. F. SMITH
MENA, ARK. J. HOLLISTER TULL
NEW ORLEANS, LA., 611 Hibernia Bank Bidg. J. M. CARRIERE
NEW YORK, Woolworth Bldg. J. P. KNIGHT
PITTSBURGH, PA., 1429 New Oliver Bldg. D. S. ROBEPTS
PORT ARTHUR, TEX.
J. E. COUNTRYMAN
GEO. KASSLING
M. F. SMITH
SEATTLE, WASH., 516 Colman Bldg.
I. W. DUDLEY
A. H. VAN LOAN
S. G. HOPKINS, (T. & Ft. S. R'y)
KANSAS CITY, MO., K. C. S. Ry. Bldg. F. E. ROESLER

"PUT YOURSELF IN CLOVER

Buy all the land you can afford to own in our Sunny Uplands of Louisiana-land in Ideal Climate, Gulf Breezes, Ample and Seasonable Rainfall. Sure Crops, a Great Variety of Valuable Products. Excellent Drainage, an Abundance of Pure Soft Water. Unusually Good Health Conditions, near Good Schools and Churches, with Railroad and Market Facilities.

SOME OF OUR PRODUCTS:

Excellent tame Grass Pastures of Clover and Bermuda Grass, Corn. Oats. Cattle, Sheep, Hogs, Horses and Mules. Poultry, Cotton, Sugar Cane, Garden Truck and Vegetables. Trish and Sweet Potatoes. Peaches, Grapes, Figs and Oranges.



During the month of May, 1913, we conducted the first land-selling excursion to our Sunny Uplands of Louisiana.

That was to a tract of about 21 .-000 acres near Carson and DeRidder.

We have sold that tract to more than 200 good, representative Northern farmers and invest-

We are now colonizing another tract of 26,000 acres only 10 miles South of the first tract.

The Kansas City Southern Railroad runs for a distance of 8 miles through this new tract.

It is a fine body of land and is exceptionally well located.

We are selling this land in subdivisions of not less than 40 acres at. \$15.00 to \$20.00 per acre.

TERMS: One-fourth cash, balance in five equal yearly payments, with interest

at six per cent.

Write to us for information about our regular land buyers' excursions and for complete descriptive advertising matter.

Representatives



217-218 Commerce Bldg., Kansas City, Mo.